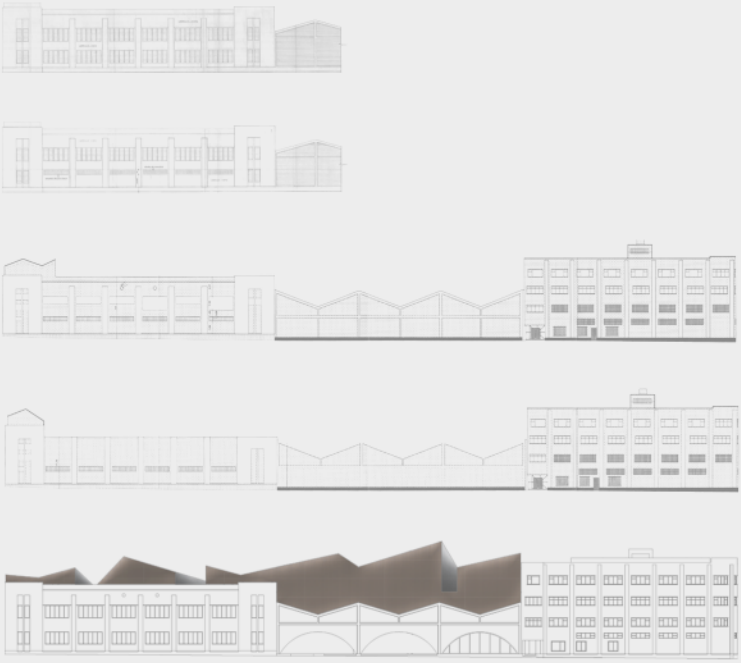
Build to Preserve, Preserve to Overcome Obsolescence

The adaptive reuse of the Andina Brewery



Julian Ardila Ospina
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2020

Build to Preserve, Preserve to Overcome Obsolescence

The adaptive reuse of the Andina Brewery

by
Julian Ardila Ospina

Supervisor: Mikko Summanen
Advisior: Hannu Tikka

Aalto University
School of Arts, Design and Architecture
Master's Programme in Architecture

Espoo, Finland
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Author: Julian Ardila Ospina
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Aalto University
School of Arts, Design and Architecture

Aalto University, P.O. BOX 31000
00076 AALTO
www.aalto.fi

Abstract

Since the last decade, the reuse of existing buildings has gained considerable relevance in architecture, not only because it contributes to the sustainable development of the built environment but also because it can be understood as a mechanism to prevent existing buildings from obsolescence. Projects such as the Verkatehdas Arts and Congress Center located in Hämeenlinna, Finland (JKMM Architects, 2007) and, more recently, the Fondazione Prada located in Milan, Italy (O.M.A, 2018), are a few examples of this tendency.

Within the framework of the urban development plan "Triángulo Bavaria" lead by Metrovivienda, this thesis will consider concepts such as preservation, conservation, and transformation as tools for revitalizing the former Andina Brewery located in Bogotá, Colombia. Among the urban development project's main objectives, strategies are suggested to recover the former brewery for its integration with the present and future city. However, and despite the intentions to recover the old factory, actions for the partial and total demolition of buildings and other structures are recommended in the plan.

As opposed to this approach, this thesis will explore the idea of adaptive reuse to suggest design strategies to entirely preserve the existing buildings and structures of the industrial complex. As a result, it is expected to recover the architectural values of the Andina Brewery through the design of contemporary spaces that meet the development plan's objectives without affecting the memory of the place.

Keywords: Adaptive Reuse, Preservation, Conservation, Transformation, Obsolescence, Cervecería Andina.

A mi padre, a mi madre y a mi hermana,
Por acompañarme de nuevo a recorrer este camino.

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Introduction

In recent years, architects have become increasingly interested in preserve the built heritage by means of the reuse of existing buildings. In the book, Preservation Is Overtaking Us written by Jorge Otero-Pailos, Otero-Pailos states that: “Koolhaas invites us to acknowledge that one of the fundamentals of architecture is the need for constant supplementation in order to overcome obsolescence. The need for supplementation, that is to say for preservation, is enmeshed with the origin of any architectural project aspiring to cultural relevance. This is the crux and the urgency of his retreat into preservation: a search to comprehend the practice of architectural supplementation in order to sustain cultural significance” (Koolhaas, Wigley, Carver, Koolhaas, & Otero-Pailos, 2014, p. 96).

In this context, conservation, as Koolhaas has cited "constant supplementation", can be understood as the act of reusing existing buildings that, unable to adapt to the new habits, customs and ways of life of the occupants, were abandoned. Furthermore, buildings considered obsolete due to lack of use or because they cannot be adapted to fulfill different functions for which they were initially conceived, result in both the physical deterioration of their structures and the loss of social and cultural meaning.

On the other hand, in the book New attitudes: designing in times of transformation, the authors affirms that the transformation processes in the existing city are not new, “since the 1970s, architects and urban designers have been involved in

the renewal of the city centres, the redevelopment of former port and industrial sites, the restructuring of post-war high-rise housing estates, and the upgrading of stations precincts" (Spaan, Spaan, & Nolan, 2013, p. 9). Therefore, architects are expected to be aware of the urban context as well as the wishes and needs of residents and occupants without falling into thoughtless urban renewal operations where entire neighborhoods are demolished and replaced by monotonous new housing complexes. In addition, "architects must able to connect with the DNA of a building or site, deal with surprises that present themselves during construction and recognize the potential for redevelopment." (Spaan et al., 2013, p. 9)

Lead by Metrovivienda, the urban development plan "Triángulo Bavaria" located in Puente Aranda, prioritizes the revitalization of the old industrial zone in Bogotá, Colombia. The plan includes the generation of green areas, public spaces and buildings for collective use, as well as more than 3,000 housing units that will benefit citizens of all socio-economic income. In addition, the plan also suggests the recovery and protection of the former Andina Brewery, considered an asset of cultural interest of the city because it was one of the first industries established in the area in the late 1940s.

For more than 50 years, the Andina Brewery managed to preserve its primary function from the year of its opening in 1947 to the year of its closure in 2000, which denotes the validity of its construction. Furthermore, the Andina Brewery highlights its importance by changing the scale in production processes,

the significant proportions of its facilities, and introducing new construction techniques breaking with the traditional architectural style in the Bogota of the 40s.

The thesis will explore the idea of adaptive reuse in the former Andina Brewery through the chronological analysis of its long consolidation process, the reasons that led to its rapid deterioration, the proposals made for its rehabilitation, and its current situation. Consequently, the thesis will provide a new vision of how to integrate the former Andina brewery to the current and future urban dynamics of the city. As a result, the proposal is expected to reveal the importance of preservation, conservation, reconstruction, transformation, and the adaptive reuse of existing buildings as one of the fundamental methods in architecture to overcome obsolescence.

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Structure of the Thesis

The present work is a historical and design study divided into four parts: The first part, based on the unpublished architectural valuation study made by the architect Sandra Marcela Melo Rodríguez, exposes the general context of the field of study and reveals the urban, technical, and architectural values that led the Andina Brewery to be considered in 2001 an asset of cultural interest for the city.

The second part is a chronological study that illustrates the consolidation process of the factory, the reasons that led to its decline, and finally exposes the different intervention strategies presented in the "Triángulo Bavaria" urban development plan since 2014. On the other hand, this chapter establishes the scope of the thesis, defines the general intervention intentions, and focuses on the specific framework of the proposal.

The third part proposes a scenario of possible actions to reuse the building complex, followed by specific design strategies to preserve and conserve the Andina Brewery's northeast corner. A collection of architectural drawings, illustrations, and architectural visualizations was developed and presented at the end of the chapter as study results.

The fourth and last part of this work reflects on adaptive reuse as an alternative to demolition and as an action to avoid obsolescence. Finally, as part of the inspiration process, original drawings of the old factory, a list of reference projects, and drawings of preliminary ideas for the proposal's design are presented in this chapter.

I
Background. Andina Brewery

1.1
Historical Review

The world economic crisis of 1929 contributed to the development of the national industry. Domestic demand saw the opportunity to innovate in the production of new items due to the shortage of imported manufactures. During the 1920s and 1930s, a significant number of peasants began to migrate to the capital due to the appearance of the industry. In this first period of industrialization, new residential areas and some working-class neighborhoods were developed simultaneously as the construction of new roads, which resulted in the expansion of the city.

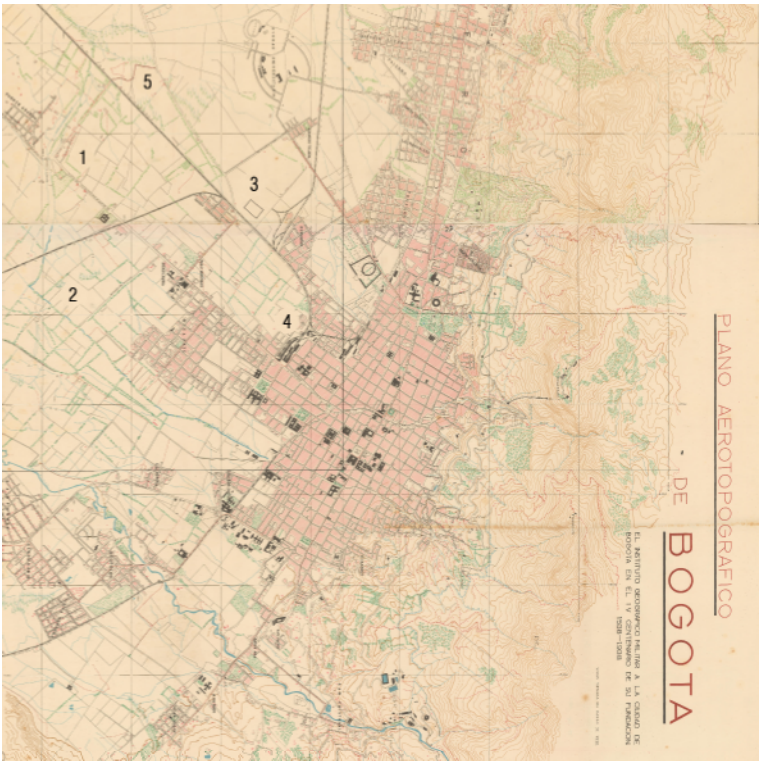
Many of the industries that began to operate at this time had the characteristic of being of considerable size, thus breaking with a homemade industry tradition. Several of these companies based their location on the proximity to energy sources such as water currents or coal mines. Some located their facilities in close access to raw materials (textiles, cement, iron, tanneries), and others, like Andina Brewery, privileged its proximity to consumption centers.

The consumption of *Chicha* and *Guarapo* (beverages derived from the fermentation of corn, fruits, and other cereals) was generalized throughout the national territory until the middle of the 19th century when beer made its appearance with the arrival of European immigrants. The change in scale and technological level occurs with the Bavaria Koop's Deutsche Bierbraverei society in 1891. In 1905, the Germanía Brewery was founded, and the Andina Brewery appeared in 1945 as the third of most importance.

2. Aerial view from the eastern side of the brewery, 1966

3. Bogotá 1797

The Andina Brewery building complex is located in the industrial sector of Bogotá, known as Puente Aranda. Puente Aranda is derived from its first known owner, Don Juan Aranda, and from the bridge built on its land to pass over the San Francisco River (formerly known as Chinúa) and the San Agustín River. The bridge was an obligatory passage of transportation of goods from the Atlantic coast to Bogotá.



4. Bogotá 1938

Although some small manufacturing companies were established in the area, the sector did not begin to consolidate until the end of the 19th century, with the works for the construction of the Sabana railway, from the city center to Facatativa, in 1873. The railway was concluded in 1889, and in 1917 the Sabana Station was inaugurated.

On the maps: 1. Puente Aranda Bridge, 2. San Francisco River, 3. Andina Brewery. 4. La Sabana railway station. 5. Western railway.

5. Aerial view, 1958
Picture: Abigail Barrera Mesa.

The first industrial development of the city of Bogotá was facilitated by the presence of railways that transported mostly raw materials, the consolidation of a road network, and public transport systems such as the tram that allowed the movement from residential sectors to new production areas. This development began to take shape from the end of the 19th century to the third decade of the 20th century and was characterized by the construction of specialized and spacious buildings outside the city center.

In 1945 the Andina Brewery was founded by the brothers Ernesto and David Puyana. In 1946, the lands where the factory was built were bought, and in 1947, simultaneously with the factory's construction, work was carried out on the opening of roads, construction of facilities, and other urban works, which were to consolidate the area with a marked industrial character.

The Andina Brewery, except some additions developed later to adapt it to new requirements, is considered an urban landmark due to the size and magnitude of the property, its functionality coherency, and a fundamental element of the Puente Aranda industrial zone. Conceived as a whole and built specifically for industrial use responding to a specific program, Andina Brewery was an outstanding industrial complex in operation for more than five decades. In recent years, it has been suffering a process of deterioration due to the closure of its activity in the year 2000.

1.2
Urban Relevance

The studies carried out by Karl Brunner in the 1936 road plan concluded that the most suitable area to house and arrange the industrial activity of Bogotá in a planned way was to the west of the capital, this area favored by the western railway line and large lots.

The Cervecería Andina block was the first to be delimited and built within what would later be called Triángulo Bavaria. The photography shows the Cundinamarca Avenue (currently NQS Avenue), which at that time was a narrow road under construction reaching the south only to the premises of the brewery. No other industrial-type constructions were built in the area, making the Andina Brewery the first in occupation.

The Andina Brewery was one of the first factories in the Puente Aranda sector, consolidating a new industrial sector conceived for that particular use by urban planners and the local government. The construction of the complex was carried out in its initial stage, in parallel with the sector's urbanization works, so it quickly became the flagship block.

The buildings located on NQS avenue played an essential role in the road's urban planning that was beginning to consolidate. Despite all the urban transformations, they were preserved until a few years ago.

6. Aerial view from the northeast side of the factory, 1947

Evidence from 1947 aerial photography shows definitive roads already delimited the block. The excavation and construction works of some buildings were already underway.

7. Orthophotography, 1948

Both the urban and factory works advanced very quickly; In 1948, all the urbanization streets were already open, and NQS Avenue had been expanded in the section in front of the factory, to two lanes with separators. In the 1948 orthophotography, no other industrial-type constructions are visible. The factory was the pioneer in the occupation, specifically in the Triángulo Bavaria.

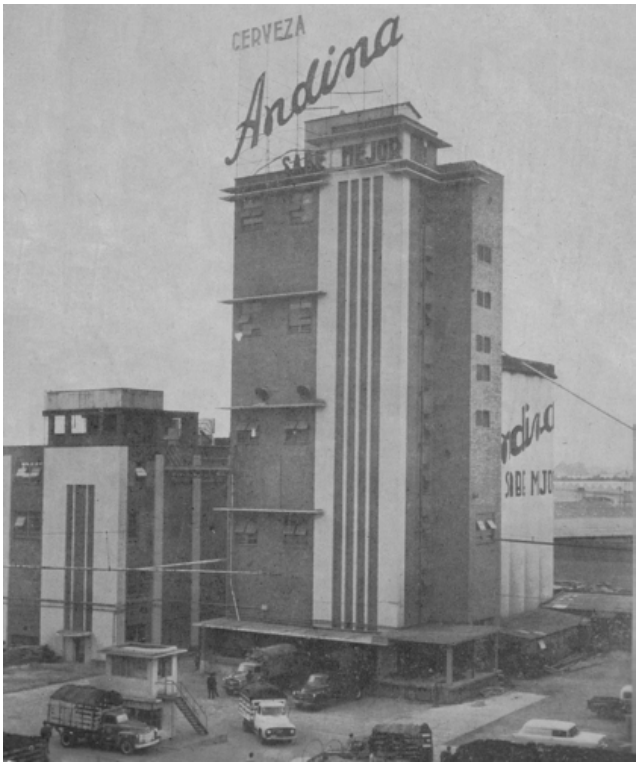
1.3
Technological Contribution

Researcher Diego Cala and architect Silvia Arango suggest that various firms, especially engineers, participated in the design and construction of the industrial complex.

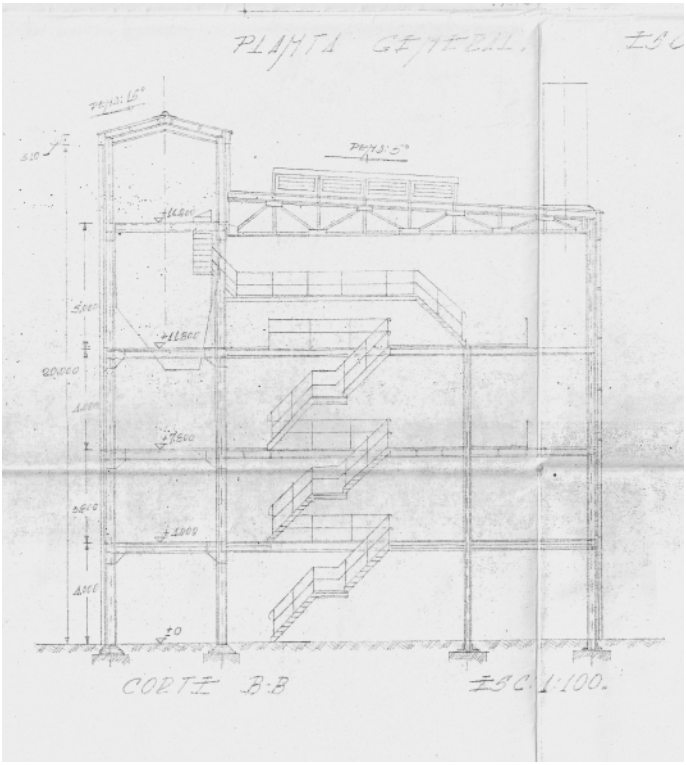
The firm Ibañez & Manner engineers stand out among the engineering and architectural firms, who played an essential role in introducing and using new construction systems in metallic structures. Along with them, the firm Trujillo Gómez & Martínez Cárdenas, the engineering-architect firm Vélez Osorio & Compañia, and lastly, the architectural firm Esguerra, Saenz, Urdaneta, Samper & Compañia, also were involved in the development of the factory.

The use of concrete for the structural solutions of most buildings of the industrial complex is noteworthy. However, the Silos building is the most outstanding for using concrete as the primary material, not only as of the tower's structural material but also in the large cylinders of the silos.

On the other hand, the Andina Brewery construction denotes its importance in using unconventional materials for the time, as is the boiler building's case, designed by the engineering firm Ibañez & Manner due to the use of metal profiles as primary structural system. This building disappeared sometime in the period between 2004 and 2007.

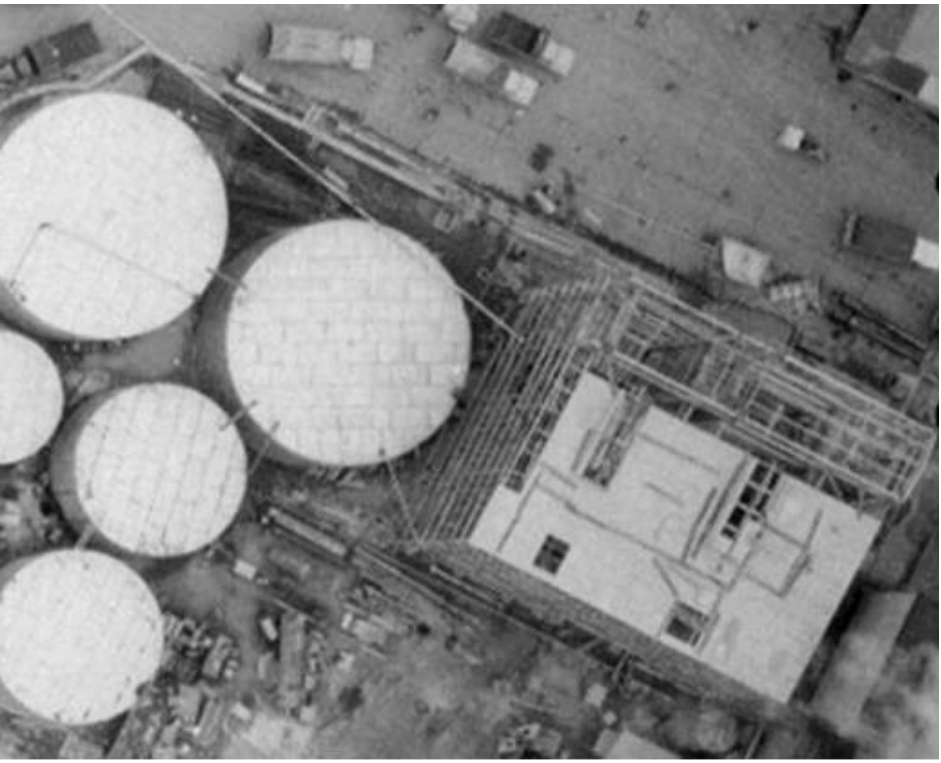


8. Malteria and Silos building, 1957



9. Section. Ibañez & Manner, 1956
10. Boiler building construction process, 1956

From the section, the use of metallic components and brick cladding is notable. On the part of Andina Brewery, the images show interest in using innovative technologies to construct its industrial complex.



1.4
Architectural Valuation

The complex was built and conceived to house a brewery. Until the year 2000, it kept its use uninterrupted, which denotes the construction's validity despite technological advances and changes in beer production.

With the factory's consolidation, around 1950, two buildings blocks are located north and south of the factory's central east-west axis. The eastern side locates the entrance door to the maneuvering yard and the Silos building at the western axis's end. Buildings built after this time blurred the functional scheme. However, even today, the eastern-western axis's strength is perceived, emphasized by the eastern accesses and by the Silos building at the western end.

Although the building complex seems like an unplanned development, it is worth to mention that there is a clear intention to frame the Silos building from the central access point on NQS avenue through the building blocks located to the north and south of the eastern-western axis.

In the entire set of buildings, the functionalism stands out for the simple volumes of free floors and few interior divisions. The brickwork, without ornaments, is outstanding and close to brutalism. Among the architectural values, the Andina Brewery is a clear example of a moment in the history of Colombian architecture, which seeks to move away from historicism and intends to adopt modern architecture precepts and the use of new construction techniques.

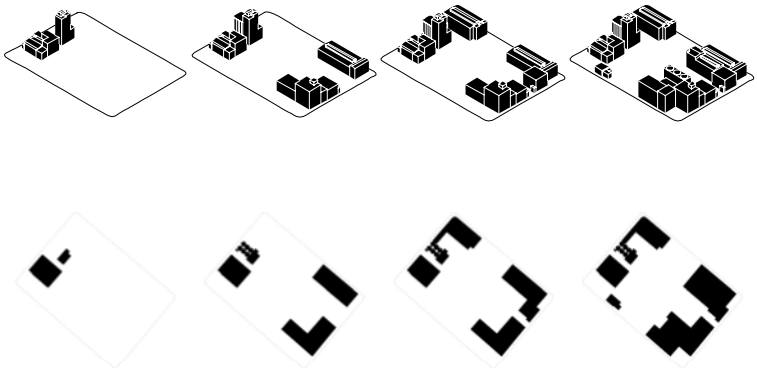
11. South-Western view of the complex, between 1951 - 1954
Picture: Paul Beer.

12. Northeast corner of the complex, 1954
Picture: Paul Beer.

13. Northwest view of the factory, between 1951 - 1953
Picture: Paul Beer.

II
Chronology

2.1
Consolidation Process: 1947 - 1981

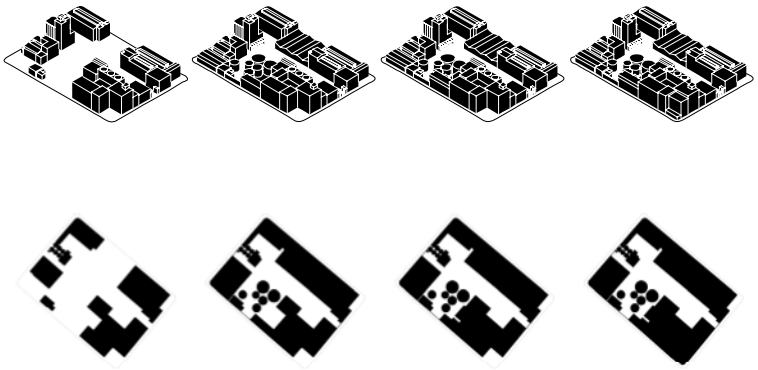


1947 *1948* *1951* *1952-54*

The Andina Brewery quickly consolidated. In 1947, the secretary of public works approved and defined the subdivision of La Florida neighborhood, which allowed the start of construction of the first two buildings, La Malteria and the Silos building.

In 1950 Andina beer began to be sold, and in 1951 the factory was officially opened. The block of the Andina Brewery was consolidated entirely by 1955. In 1956, the new boiler building's construction towards the interior of the block stands out, designed and built by the engineering firm Ibañez & Manner.

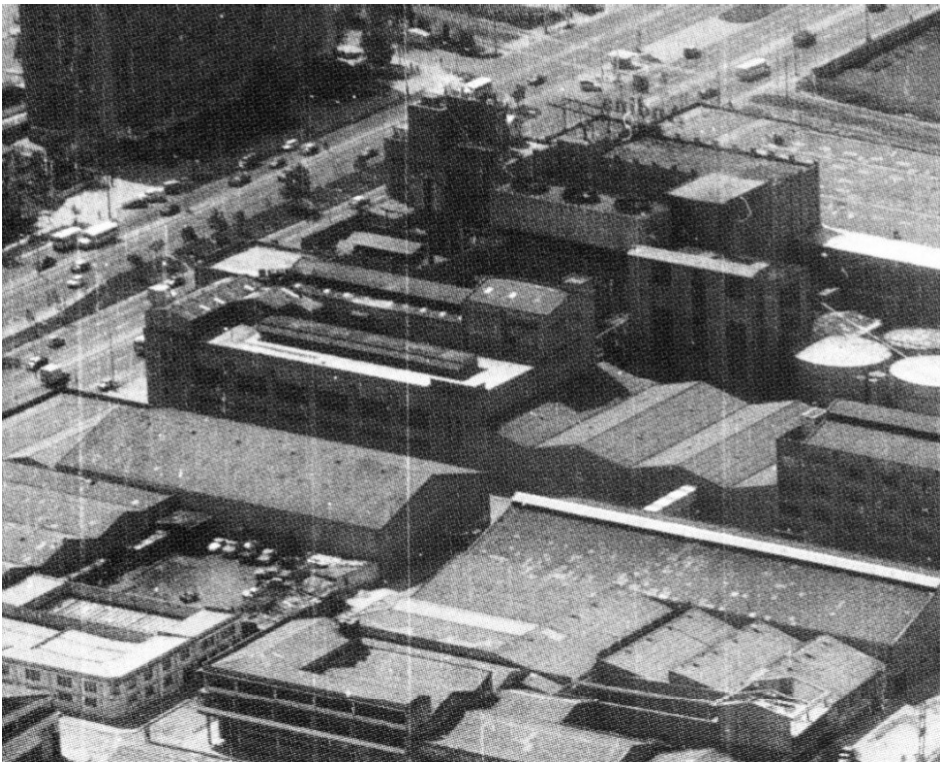
The following years' consolidation process shows a block morphology where robust and rectangular constructions predominate in the perimeter. In contrast, in



1956 *1957-76* *1978* *1981*

the center of the block, lighter and more temporary constructions were removed and replaced throughout the fabric's life. By 1981, the block reached its maximum building density, resulting from the consolidation of the 60s and 70s.

The morphology of the block of the Andina Brewery never showed the shape of a cloister. On the contrary, two large building blocks, one to the south and the other to the north, were built, leaving a central void for the circulation of trucks and personnel in the eastern-west direction, defined by two main accesses NQS and 32 street, respectively. These accesses are currently maintained.



14. Northwest side aerial view, 1981

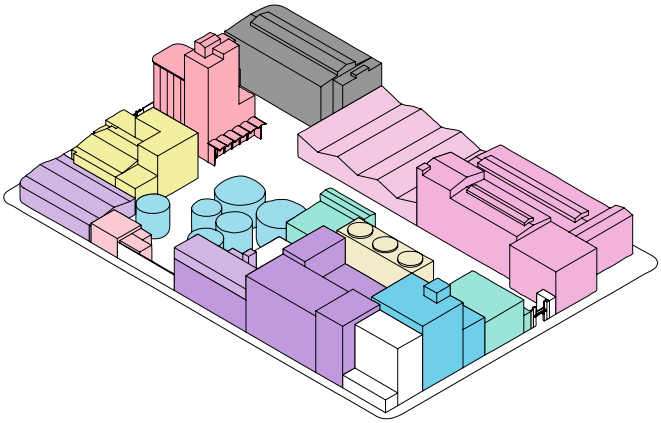
2.2
Functions 1981

By 1981, the block's perimeter buildings were used mainly for industrial processes of beer production and administrative uses. From these buildings, stand out the "Knowledge and Laboratories" and the Silos building. The latter stored raw material for brewing.

The dismantled of the oil and water tanks, located in the center of the block, began when the factory ceased operations in 2000. Besides, the construction of the boiler, in which water was mixed with barley to obtain the beer must, is distinguished for the Ibañez & Manner engineers' work.

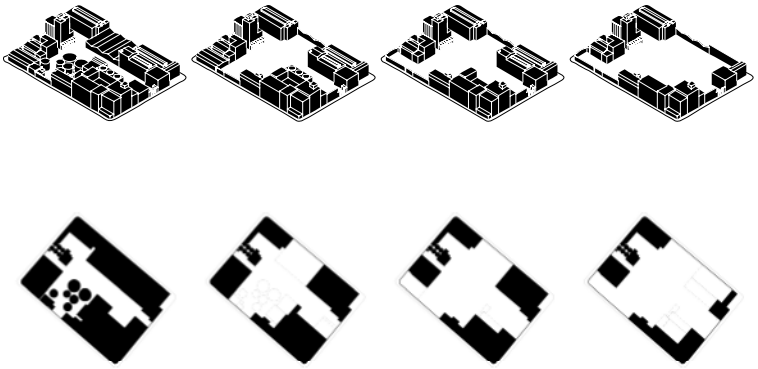
In the economic context, the Andina Brewery played an essential role by being part of the local beer industry. Over time, it manages to position itself in production and sales volume until it becomes one of the most important breweries in the city and the country.

Due to the new needs for production and storage capacity and upon reaching their maximum building capacity within their block, the Puyana brothers became interested in buying the land surrounding it. The landowners raise the prices knowing these needs, and in consequence, the Puyana brothers decide to wait a while to buy. Its main competitor, Bavaria Brewery, finds out about these efforts and acquires neighboring lands in a short time, paying high prices and immediately building warehouses, preventing the expansion of the Andina factory.



The illustration shows the relationship between the buildings' functions, the block's morphology, and beer production.

2.3
Decay and current situation

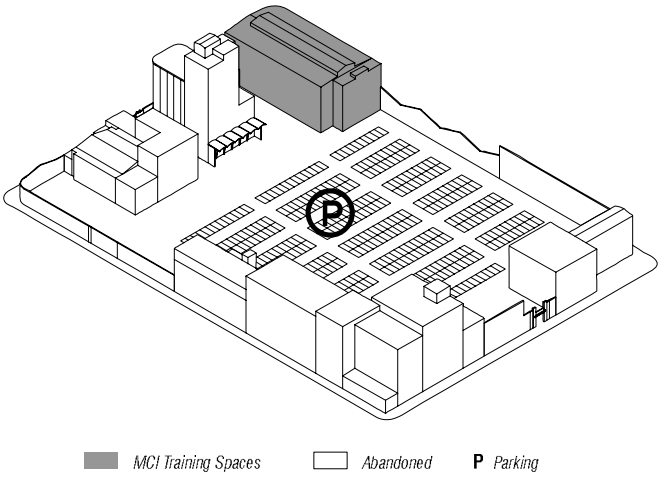


1981 *2007* *2010* *2017*

In the so-called “batch war” between Andina Brewery and Bavaria, Andina suffered a decisive blow in its expansive projects, a permanent and psychological annoyance since its neighbor was its main competitor.

Due to the failed plans to expand the factory and mismanagement, in 1983, the brewery was sold to Compañía del Litoral S.A. In 1990, Bavaria bought the factory from the Compañía del Litoral and kept it in operation until 2000.

The process of deterioration of the factory began after Bavaria suspended its use and left the premises. In this process, it was necessary to dismantle large fragments of walls and some structural elements to extract the machinery from the buildings, which also contributed to the factory's deterioration.



In 2001, the Departamento Administrativo de Planeacion Distrital (DAPD) declared the property with its industrial buildings as integral conservation. The building remains abandoned for nine years until the Misión Carismática Internacional (MCI) bought the industrial complex. Since then, the Andina Brewery has lost two-thirds of all its buildings.

Currently, the central space is used as a public parking lot while the rest of the buildings of the old Andina factory remain abandoned, except the building located on the north-western corner. The MCI rehabilitated the building in 2012; since then, the building functions as a leadership training center and administrative offices for the church.

15. Orthophotography, 2017

From the image, it is noticeable how the central space is underused. Furthermore, only the perimeter facades allow a straightforward reading of the block.


VIDA

16. Panoramic View, 2013

Picture from inside looking west. The highest building, the Silos, can be appreciated in the background, whereas MCI currently occupies the building on the right. As can be seen, the central space, which had the most significant impact due to its structures' demolition, is now underused.

17. Panoramic View, 2013

Picture from inside looking east. In the center of the image, the main access door from the NQS avenue. Despite the deterioration, complete structures of the knowledge and laboratory building are recognizable towards the south. On the other hand, to the north side, only the facade walls are preserved.

2.4
Triángulo Bavaria Urban Development Plan 2014

The urban development plan Triangulo Bavaria, in the Puente Aranda city district, proposes revitalizing the sector by transforming this area of the city into a new development pole that contributes to the consolidation of Bogotá D.C. as an orderly, inclusive and diverse city.

The plan proposes to promote this area of the city through an urban proposal that integrates and articulates different activities and land uses such as housing for all sectors of the population, offices, commerce, public facilities, green areas, recreational areas, and parks. These new uses will consolidate public space by strengthening the existing urban structure.

Moreover, the plan seeks to integrate various sectors of the population by improving residents, workers, and visitors' living conditions. It proposes to guarantee the participation of the current owners in the project, mitigating the urban plan's impacts.

Aware of the importance of linking the territory's historical memory, the urban plan contemplates identifying, recovering, protecting, articulating, and revitalizing the architectural heritage represented by the old Andina Brewery buildings, integrating it into the development of the current and future dynamics of the project.

Site Plan 1.7500

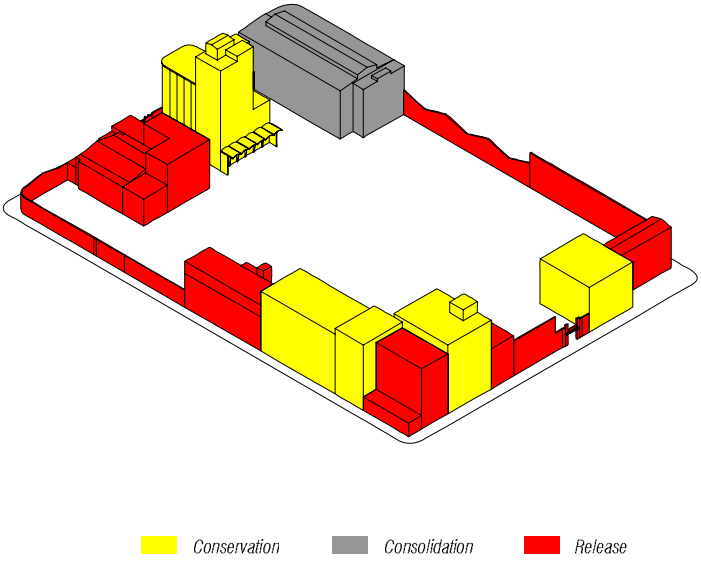
Triangulo Bavaria 1. *Américas Avenue* 3. *Western Railway*

Andina Brewery 2. *NQS Avenue*

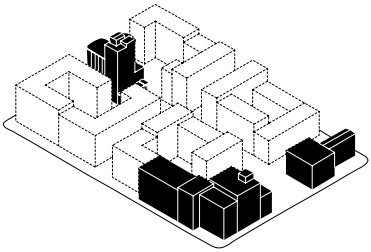
The urban development plan includes, among its specific objectives, the historical review of the Andina Brewery. Apart from establishing the industrial complex's architectural values, the study suggests in detail the different levels of intervention applicable to the Andina Brewery buildings and determines the levels of conservation applicable in each one of them. As a result of the historical review, the urban development plan defined the following intervention levels: Conservation, Consolidation, and Release.

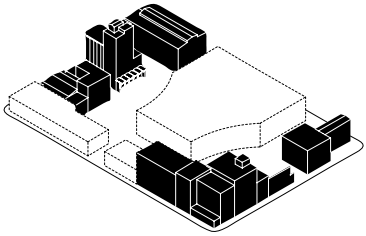
In coordination with the Instituto Distrital de Patrimonio Cultural (IDPC), the urban development plan suggests the necessary actions for the recovery, restoration, and intervention of the heritage buildings. Besides, it regulates the conditions of applicable normative for new developments in the block that allow the harmonious integration of the industrial complex with the city's urban development plans.

According to the historical review made in 2014, the industrial complex has lost approximately 60% of its buildings. The preceding suggests that, despite being declared in 2001 as integral conservation, the Andina factory continues in the process of deterioration that will be accentuated by the liberation, understood as demolition, of structures and other buildings of the building complex, which, contrary to guaranteeing the conservation of the existing buildings, accentuates its deterioration.



According to the Triángulo Bavaria urban development plan, it is suggested to preserve, as much as possible, the buildings of the building complex. However, as can be seen in the illustration, these interventions go against what is recommended.



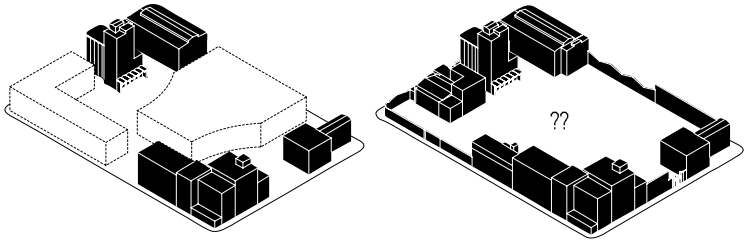


2014 - I *2014 - II*

As the Andina Brewery is a heterogeneous set in the qualities of its architecture and the state of its conservation, since 2014 the urban development plan has seen it necessary to visualize the different urban renewal scenarios on the industrial complex. Increasing the buildability in addition to suggesting new uses allows resources to be generated for the conservation of the building complex.

The urban development plan recommends that the block's interventions seek to preserve as much as possible the existing buildings in the building complex. Similarly, the plan suggests that the volumes added to the block must respect the heights of the heritage buildings.

Furthermore, the study recommends that new buildings must show that they are contemporary interventions. Finally, the urban development plan indicates



2016 - I *2020*

that the conservation of the buildings located on NQS Avenue is desirable, while it should seek significant permeability towards the north and west side, emphasizing in the latter, the reading of the Silos building.

Despite these recommendations and according to the information obtained for this study, it is possible to establish that none of the suggested models (shown above) follows the urban development plan indications, even when they present interesting forms of occupation.

The above mentioned opens the possibility to explore an occupation model that meets the recommendations established in the architectural assessment study and, at the same time, guarantees the conservation and preservation of the building complex, claiming the role of the Andina Brewery within the sector.

III
Andina Brewery Proposal

3.1
Location

Colombia - Bogotá
4.5709° N, 74.2973° W
49.07 million (2017)
1,141,748 km2

Bogotá - Pu
4.7110° N,
7.413 milli
1,587

ente Aranda
74.0721° W
ion (2018)
7 km2

Puente Aranda - Triángulo Bavaria
4.6150° N, 74.1147° W
221.906 million (2017)
17.31 km2

3.2
General Proposal

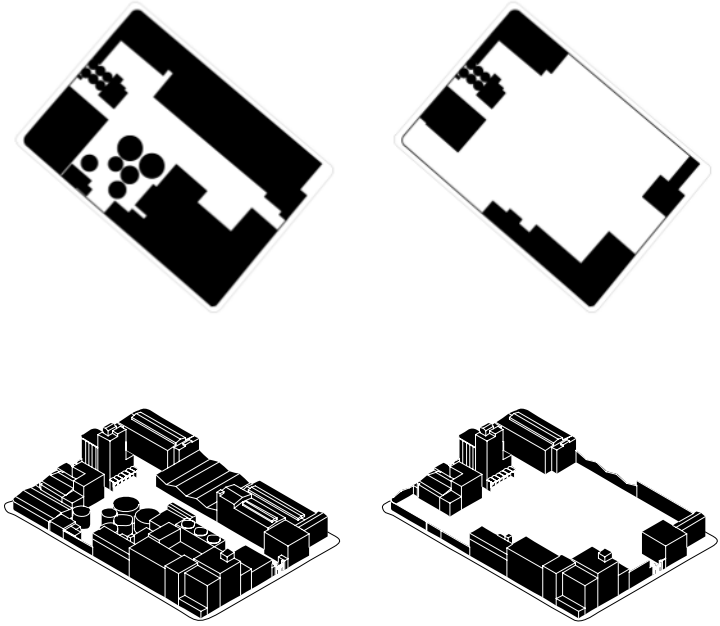
Current Situation

Urban Development Plan 2014

Without going into analyzing the successes and failures of the urban development plan and understanding the need to recover this sector of the city due to the notable deterioration of its urban structure, the general proposal aims to reuse and incorporate new uses in the buildings that comprise the set of the Andina Brewery. This intervention is part of the adaptive reuse trends and is part of alternative development routes.

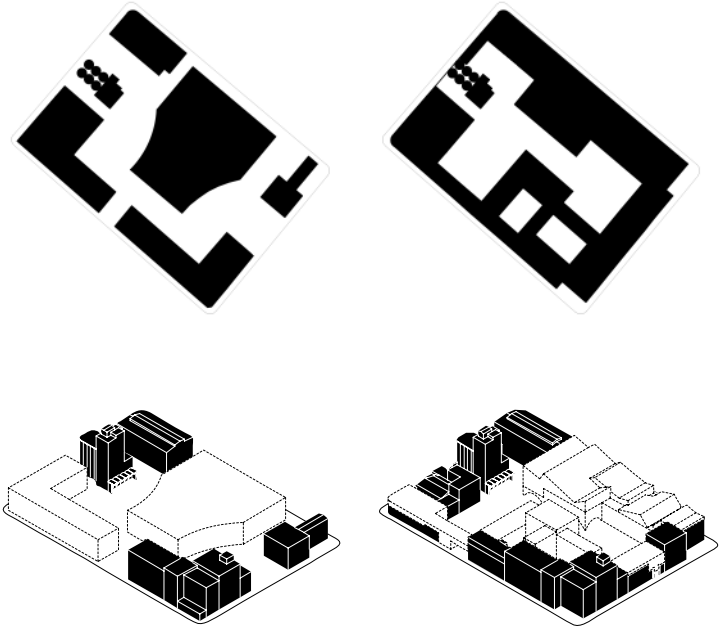
Proposal

Besides, the general proposal aims to enrich the urban void (in structural and functional terms), qualify the public space based on the morphological re-composition, and articulate the block of the Andina Brewery with the fabrics proposed in the urban development plan. Finally, recycling abandoned structures, rehabilitating deteriorated heritage, and rescuing the meanings offered by inhabiting a cultural interest property are part of the specific objectives.



Past *Current Situation*

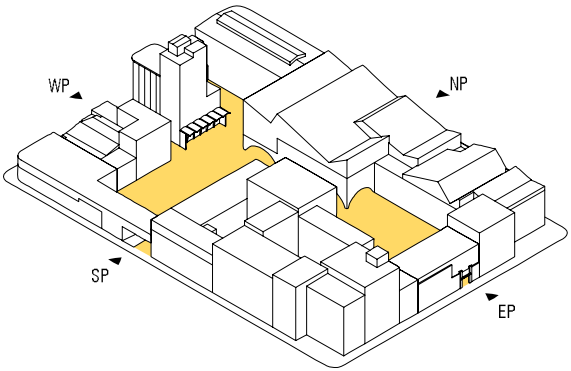
The previous chapter exposed both the Andina Brewery's consolidation process and the reasons that led to its deterioration. Similarly, illustrations of the intervention models suggested in the Triángulo Bavaria development plan were presented. In these, the bulldozer's renovation seems more suggestive than recognizing the pre-existing structures, the rehabilitation of the building complex, and the public space qualification.



Master Plan 2014 *Proposal*

Contrary to the clean slate renovation, typical of the 70s, this proposal recognizes the material and immaterial value of the pre-existing structures, defends the diversity of development, moderate re-densification, and the morphological re-composition of the fractured tissue. This strategy translates into ensuring the building complex's vitality, maintaining its functional validity, and finally contributing to its preservation over time.

North-south passage. View to the east.



Circulation & Public Space

Courtyard

NP *North Passage, 22B Street*

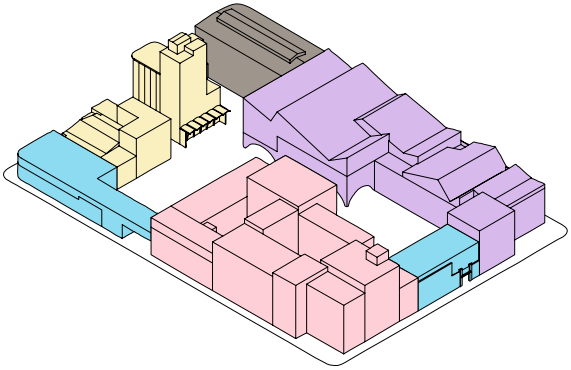
EP *East Passage, NQS Street*

SP *South Passage, 22A Street (Parking entrance)*

WP *West Passage, 32 Street*

Given the need to connect the Andina brewery block with the new dynamics formulated in the development plan, the central void, currently used as a parking lot, is transformed into attractive patios and plazas. The intimate and private patios result from the morphological re-composition of the new buildings located in the center of the block. In this sense, the plazas are re-imagined as a complete system defined by the factory's historical axis (east-west) and by the new direction (south-north), a flexible space designed to walk, contemplate, and host public events.

In the proposal for new uses, the MCI offices coexist with new and refurbished buildings that include a Beer, Chicha, Guarapo museum, a science and technology innovation center, a community center, and multipurpose event



spaces. The building complex's functional proposal widens architectural and functional typologies' repertoire, activating the patios and plazas inside the block.

In this sense, patio, plaza, new, old, wide, narrow, public, private: all these contrasts establish the range of oppositions that define the new Andina brewery. The complexity of the architecture and its public space offers a set of fragments in a state of permanent interaction by introducing these spatial variables.

View into the plaza

The proposal understands that the assets of cultural interest in Bogotá consist of buildings of various uses, typologies, scales, and construction techniques representing different periods of the city's architectural development. Besides being a reference to citizens' memory and identity, this variety is also part of their cultural wealth; therefore, it must be protected and preserved.

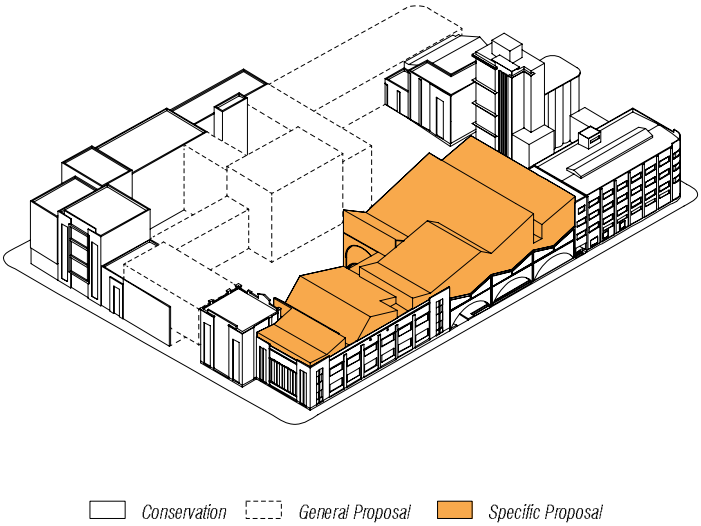

"Andina"
Museo

3.3
Specific Proposal

Contrary to the suggested intervention proposed in the Triángulo Bavaria plan, this proposal's specific objective is to recompose the morphology of the north façade by adding a new volume. Furthermore, the courtyard's access will be possible through a delicate opening operation on the north façade. Similarly, an internal corridor will connect the MCI office building with the main event room. Finally, the tower on the eastern side will incorporate new complementary functions to the new building.

The new building consists of multipurpose event spaces, temporary exhibition spaces, restaurants, and a community center. These various functions and the sequence of spaces in the proposal, lobby - main staircase - event room, allows establishing a past-present-future timeline creating a continuity between the existing structures with the new sections of the building. The proposal's materiality, both inside and outside, emphasizes that the new highlights the loss without imitating it.

Finally, three design strategies define the development of the proposal: 1. Existing, Void and Mass, 2. Horizontal Circulation, and 3. Flexibility. This particular combination of strategies multiplies the number of interactions between the user, the existing building, and the new building. In this sense, both the proposed uses and the spaces' configuration seek to establish functional relationships between the building and its context, where it can be understood as independent parts or as a unified whole.



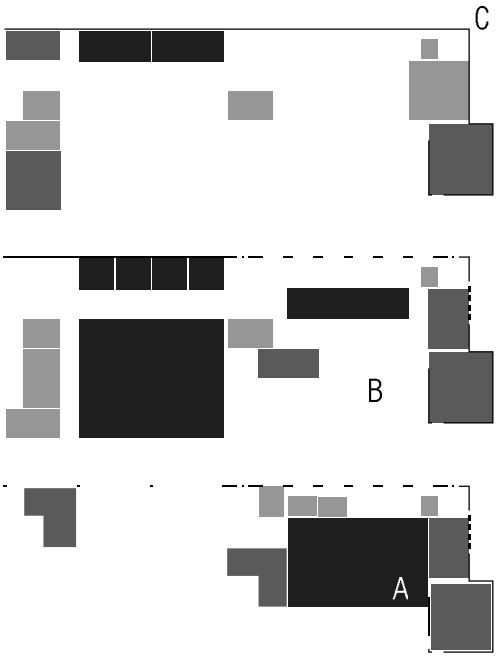
As the primary tool for the conservation of the northeast corner, the proposed building will serve as a support for the north façade and, at the same time, highlights its urban, aesthetic, and architectural values.

1. Existing, Void, Mass

The building's living space is considered the product of the relationship between the existing, the void, and the mass. The existing represented whit the remain elements of the Andina Brewery north facade, the void represented by the circulation spaces that connect the new with the old, and the mass represented with the new building's functional areas. From a broader perspective, the proposal exists because of its good relationship with itself and its environment.

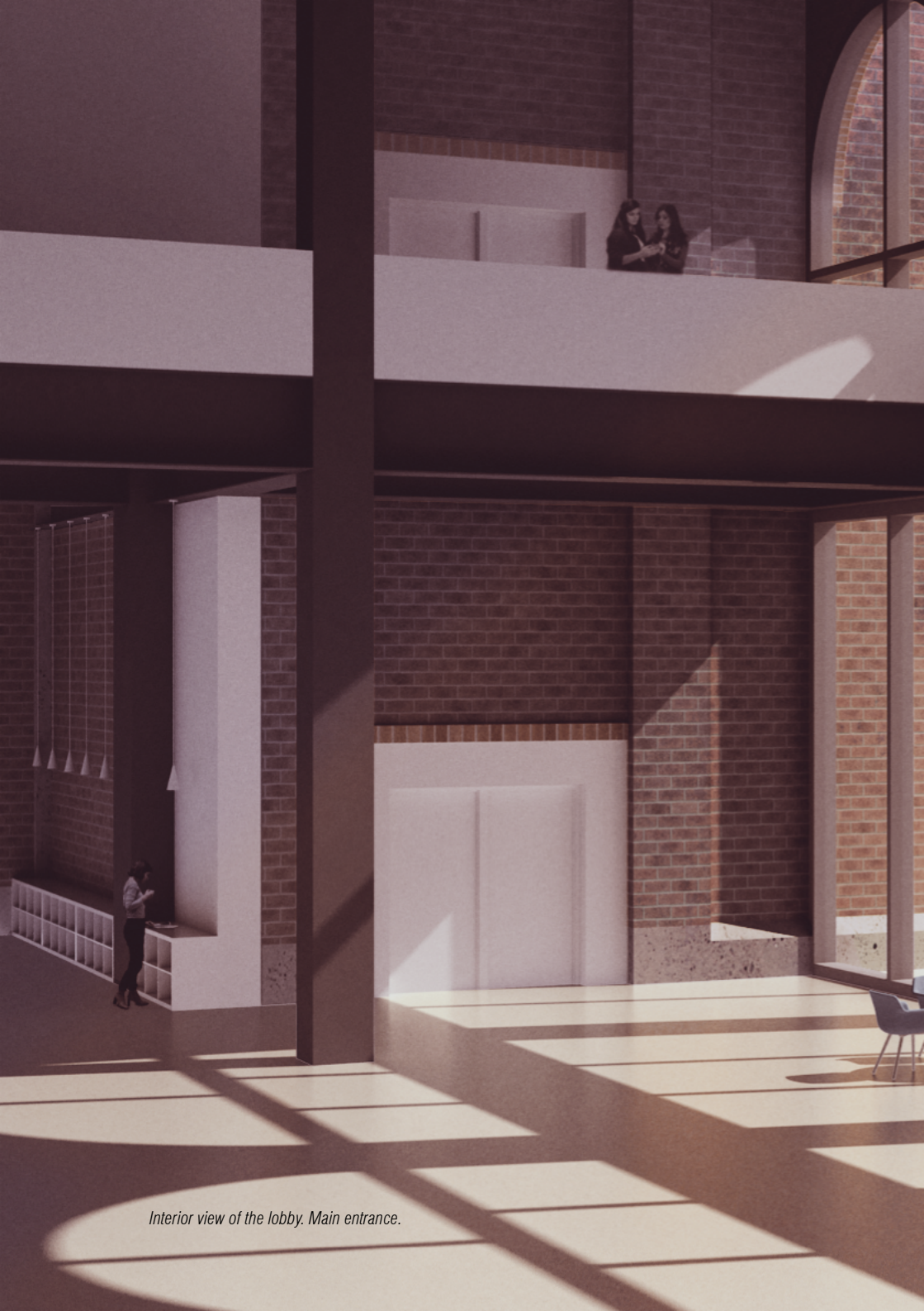
According to its definition, the void means "nonexistence or nullity." On the contrary, in architecture, void could be understood as a built space defined by the contour of its limits. In turn, these limits establish different formal relationships in architectural spaces: interior-exterior, open-closed, white-black, among others.

For the new building of the Andina Brewery proposal, the void is also understood as a space for circulation, transition, permanence, and balance. The intentions of these voids or "places" are to promote the encounter between the different visitors and, even more, to establish multiple relationships between the space, the user, and the old building; in other words, existing-void-mass. In this sense, the Existing-Void-Mass design strategy aims to build a coherent relationship where the old building, the new one, and the user actively interact.

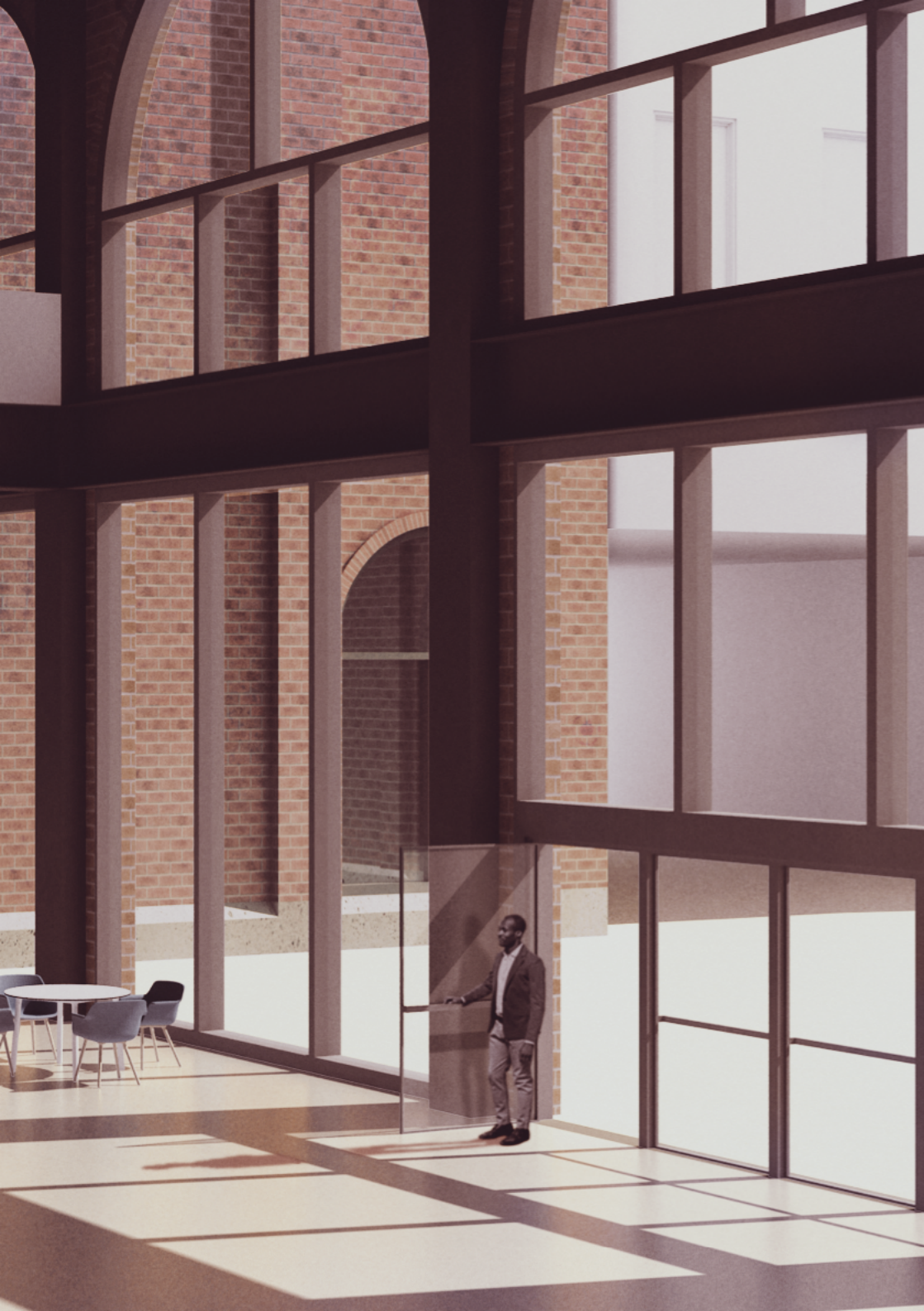


Existing, Void and Mass Diagram

In the Existing-Void-Mass diagram, the mass (A) represents the functional areas of the building defined at the same time by their degree of privacy. While the dark areas represent the building's public spaces, the light tones represent the private spaces. The illustration's white areas represent the void (B), spaces for circulation, permanence, and contemplation. Finally, the existing (C) represented by the thin and delicate line of the existing building contains the void and the mass.



Interior view of the lobby. Main entrance.

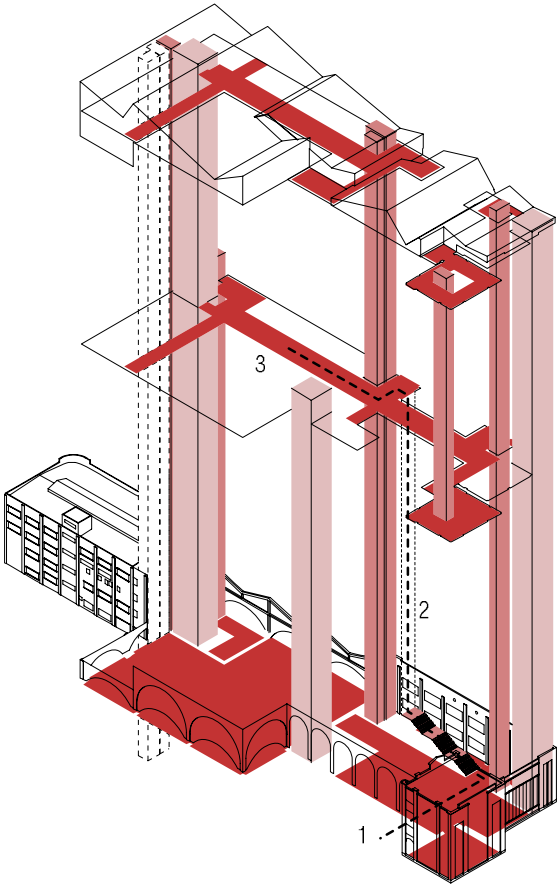


2. Horizontal Circulation

In architecture, circulation is often a result of how people move through different areas of the building. The new building of the Andina Brewery, the circulation, fulfills a task beyond the merely functional. On the one hand and following the proposed architectural program, the circulation areas articulates the different spaces by establishing multiple encounters. Simultaneously, circulation refers to how to enter, contemplate, and interact with the old building.

The first floor's free movement, associated with the adjacent square's pedestrian axes, invites pedestrians to enter the building. The new building's façade allows the views to the opaque and worn brick façade of the old factory through the double-height windows. In the background, the main staircase, on its long and leisurely journey to the second floor, allows the visitors to imagine and contemplate the surroundings, seen in other times, through the existing windows. At the end of the tour, the multipurpose event space allows its visitors to interact and enjoy the spatial flexibility possibilities.

In this way, the circulation strategy, in addition to organizing the proposed areas, also seeks to make visible the experiences that occur there, promoting the sense of belonging to the existing structures of the old Andina Brewery.



Circulation Diagram

1. Enter

2. Contemplate

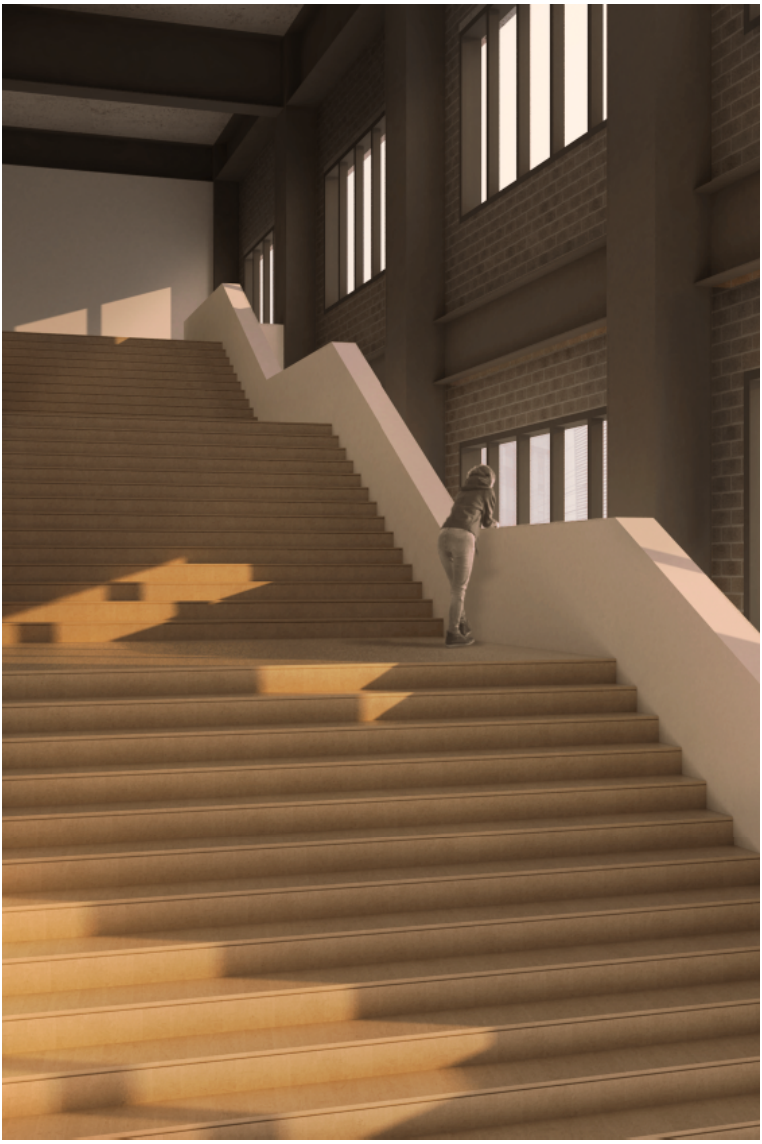
3. Interact

Horizontal Circulation

Vertical Circulation

Emergency Exits

Service Access



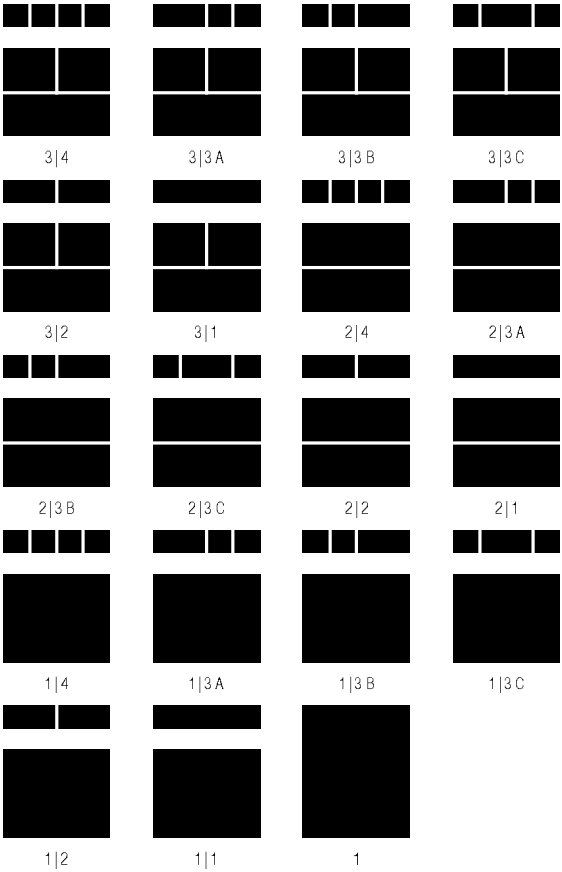
"A less self-evident but utterly poetic and essential experience of home is the window and, in particular, the act of looking out of the window of the home at the yard or the garden. Home is particularly strongly felt when you look out from its enclosed privacy. The tendency of contemporary architecture to use glass walls eliminates the window as a framing and rationing device and weakens the essential tension between the home and the world." Pallasmaa, J. (1995)

3. Flexibility

"Flexibility" in architecture refers to a building's ability to adapt its spatial distribution, and even its structure, to changing needs. The proposal addresses flexibility as a functional principle where the use of multipurpose space passes through the users' appreciation, instead of a real "transformation" of the building.

As proposed here, flexibility does not concern transformations in the building's new skin nor changes in the structure. Instead, flexibility responds to the need for having spaces capable of being configured in different sizes due to the number of users and the capacity to simultaneously host multiple events. To achieve this degree of spatial flexibility and support any spatial distribution, services such as bathrooms, kitchen, and storage areas are organized uniformly and parallel to the main events space only divided by a distribution corridor.

Spatial flexibility appears here as a response to reconcile society's needs in constant change, with the increasing interest to protect, conserve, and reuse the architectural heritage.



The space flexibility diagram shows the multiple configurations of how can be configured the multipurpose event space.

Interior view of the multipurpose event space, in the background on the top floor, the community center's spaces can be seen. Similarly, the entry of natural light into the spaces is possible through the windows on the sloping roofs.

Axonometric functional diagram.

2nd Floor
1206 m2

- *Community Center*
- *Exhibition*
- *Restroom*
- *Technical Room*

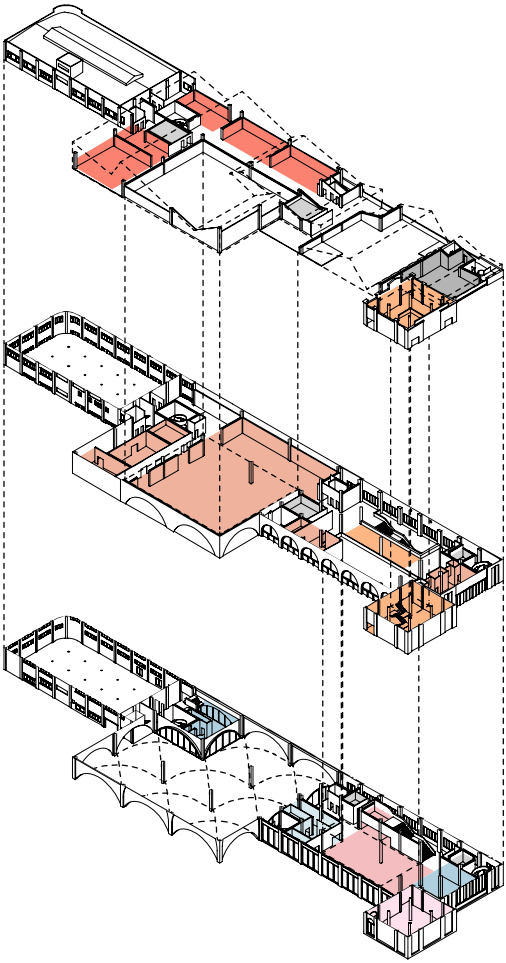
1st Floor
2292

- *Multipurpose*
- *Exhibition*
- *Restroom*

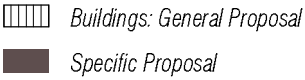
Ground Floor
1482 m2

- *Lobby*
- *Auditorium*
- *Shop*
- *Restaurant*
- *Restroom*

Total
4980 m2



3.4
Architectural Drawings


Buildings: General Proposal


Specific Proposal

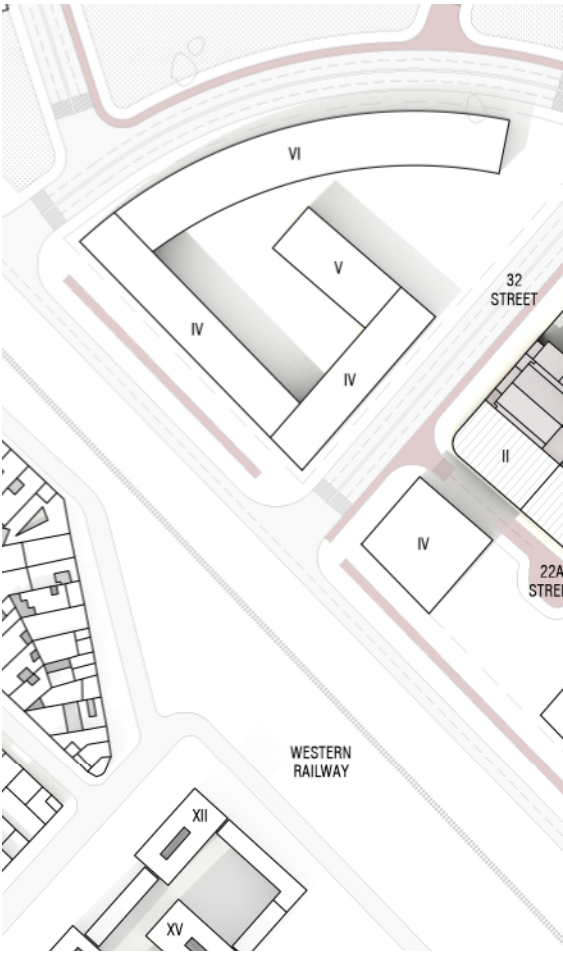
Existing Buildings

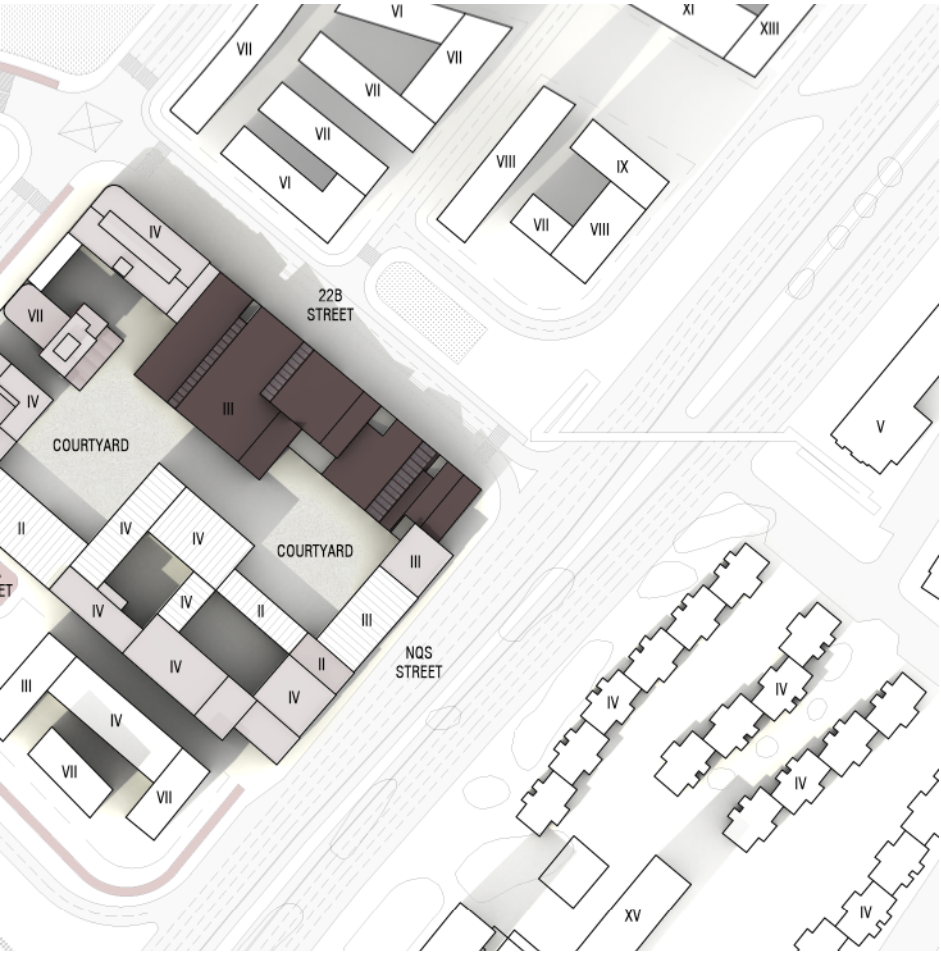

Green Areas

Bike Lane

Traffic Lane

Site Plan
1.2500




VI
VII
VII
VII
VII
VI
XI
XIII
VIII
IX
VII
VIII
IV
VII
22B
STREET
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III
COURTYARD
V
II
IV
IV
COURTYARD
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NQS
STREET
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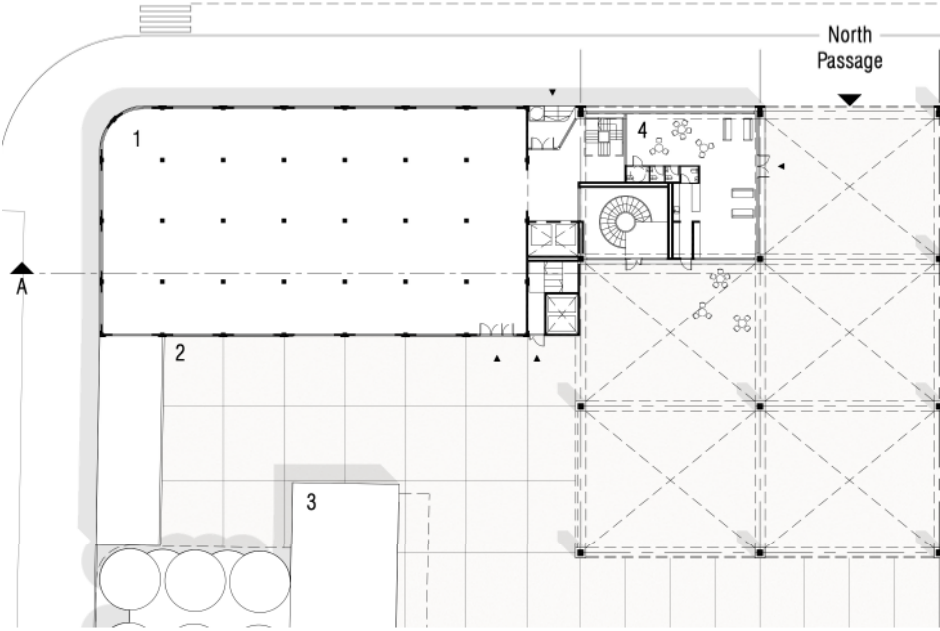
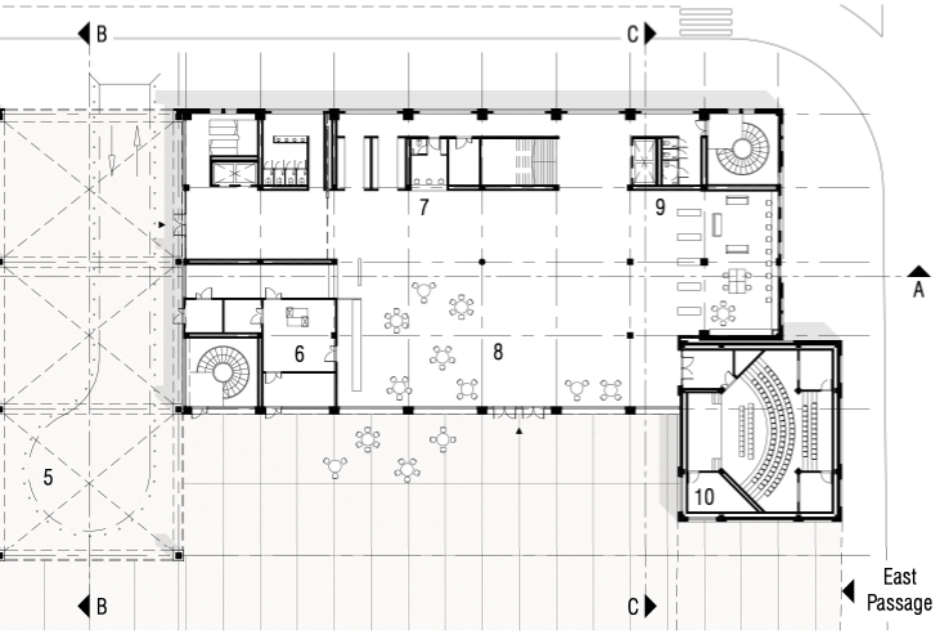
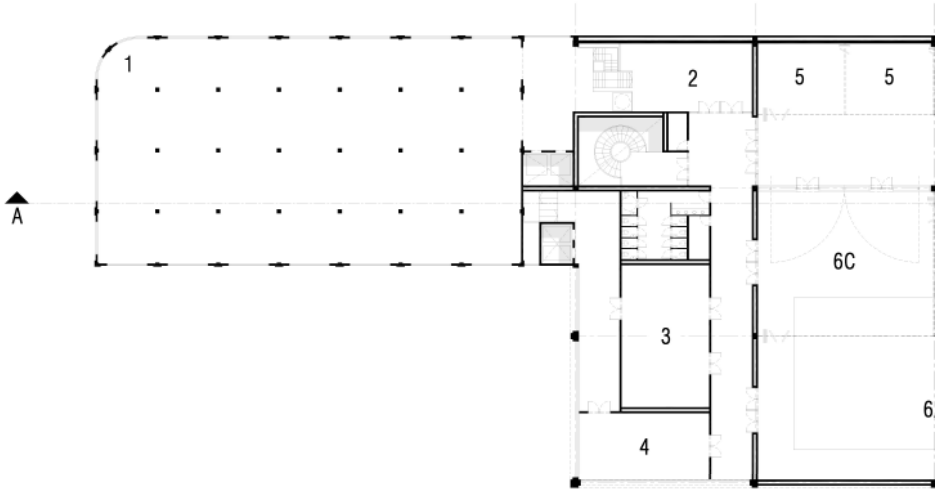


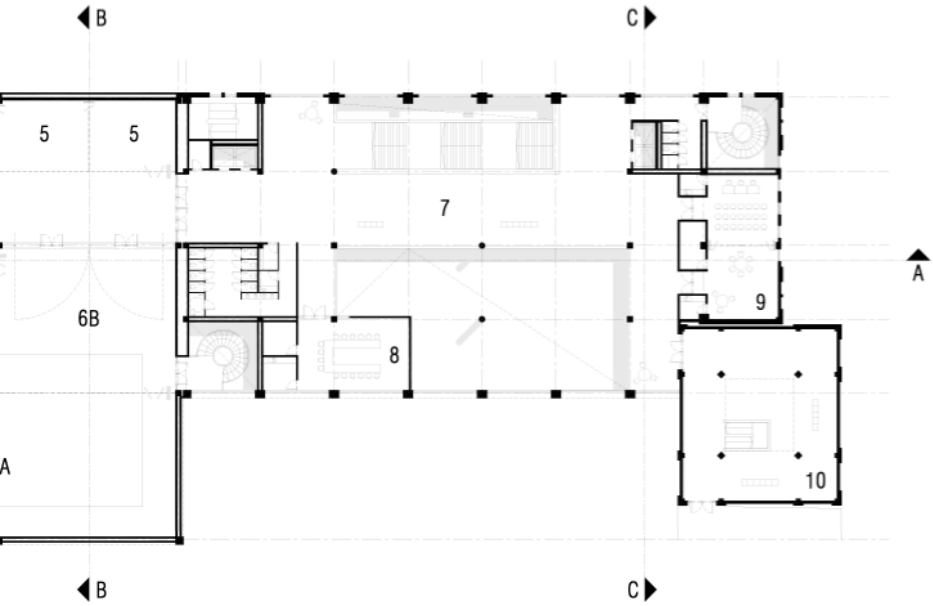
Ground Floor
Level + 2566
1.750



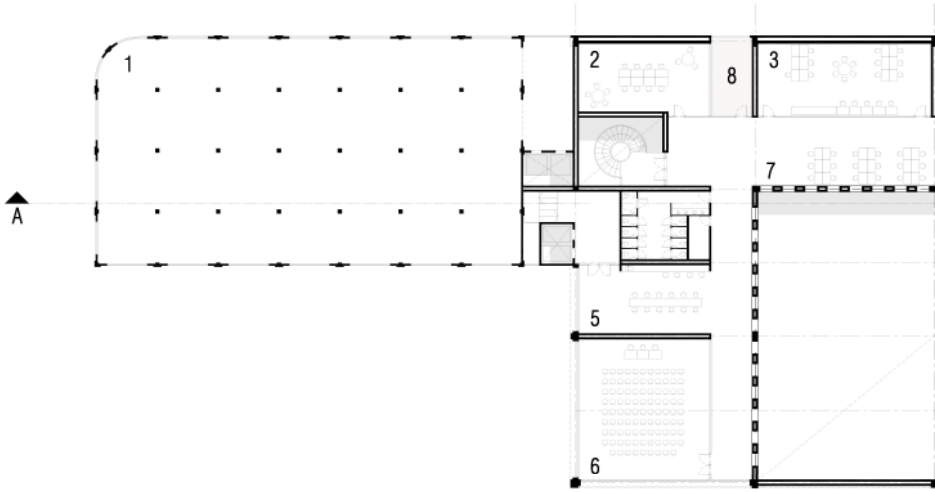
1. Existing Building. MCI Offices
2. MCI Courtyard
3. Beer Museum
4. Coffee Shop
5. Temporary service parking
6. Kitchen
7. Info Desk
8. Lobby
9. Book Store
10. Auditorium



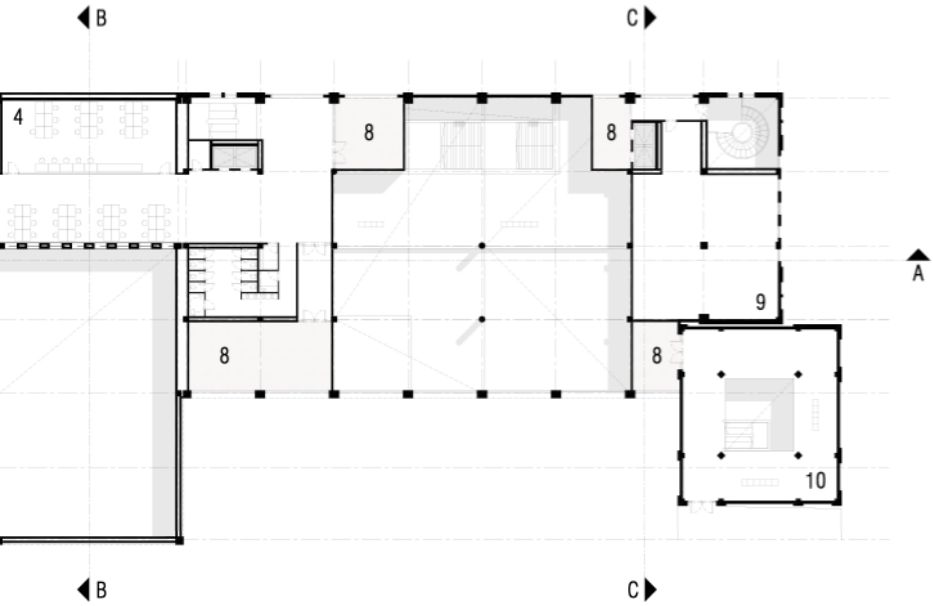
First Floor
Level + 2572,80
1.750



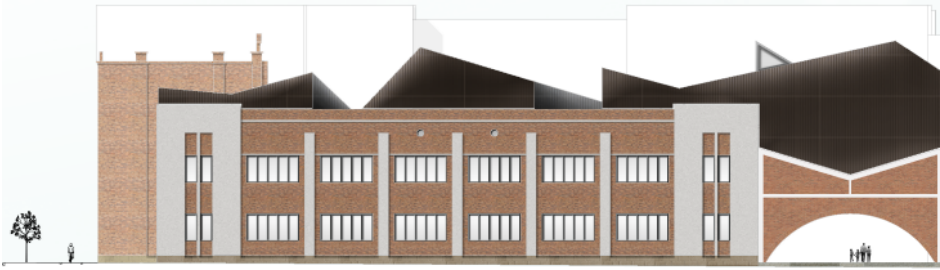
1. Existing Building. MCI Offices
2. Entrance from the MCI offices
3. Service Entry / storage
4. Kitchen
5. Multipurpose Space
6. Event Space. Hall A, B, C
7. Temporary Exhibition Bridge
8. Conference Room
9. Meeting Room
10. Temporary Exhibition Gallery



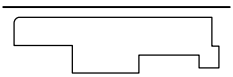
Second Floor
Level + 2579,60
1.750



1. Existing Building. MCI Offices
2. Meeting Room
3. Study Group Room
4. Computer Lab Room
5. Service Entry / Kitchen
6. Seminar Room
7. Flexible Learning Environment
8. Terrace
9. Technical Room
10. Temporary Exhibition Gallery



NQS
Avenue



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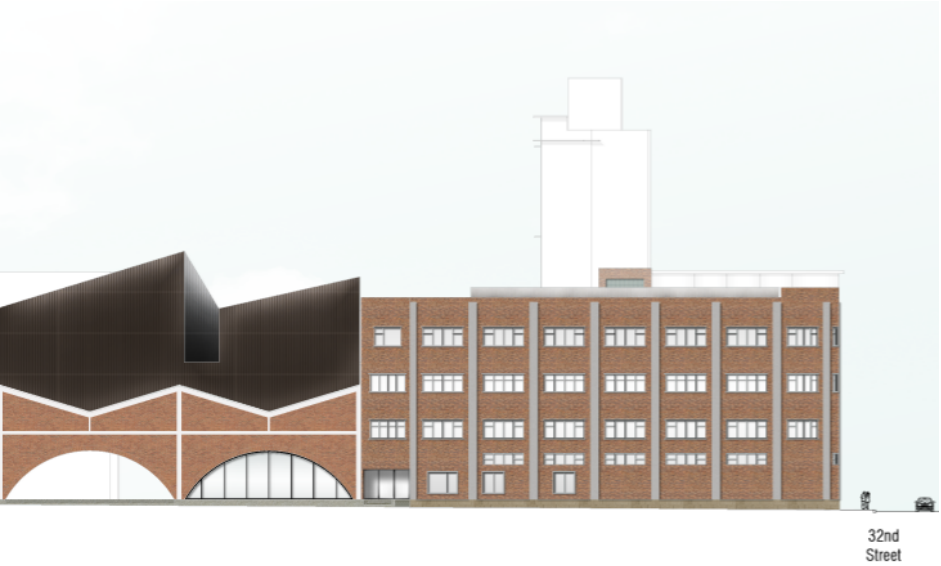
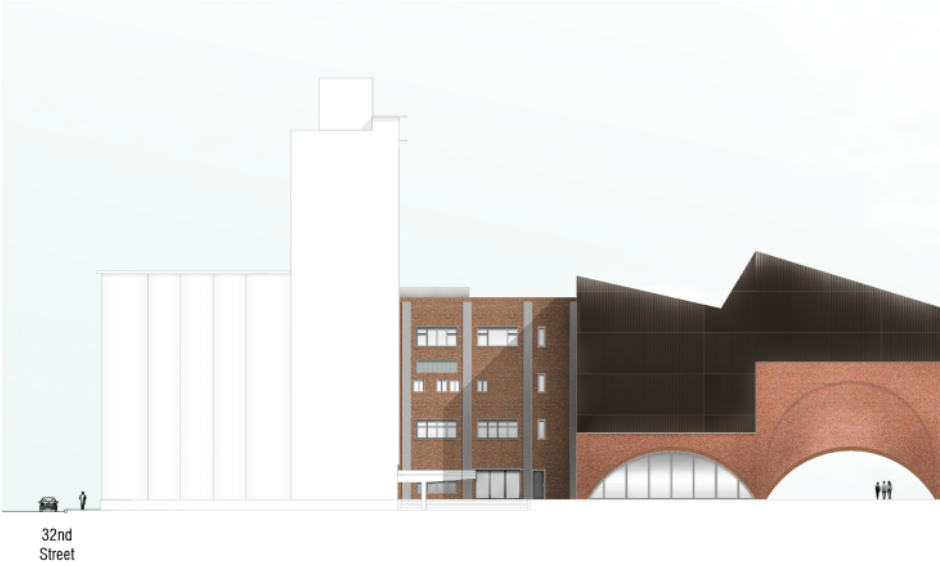
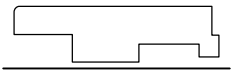


North Elevation

Breve descrpcion de las inteciones en la fachada exterior.

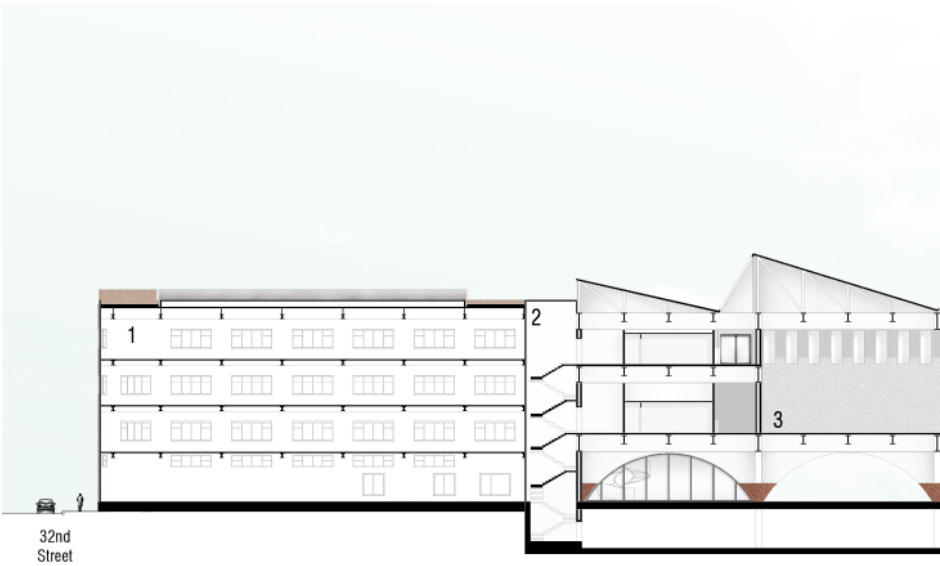


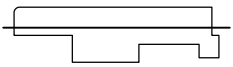


1.750

South Elevation

Breve descrpcion de las inteciones en la fachada interior.





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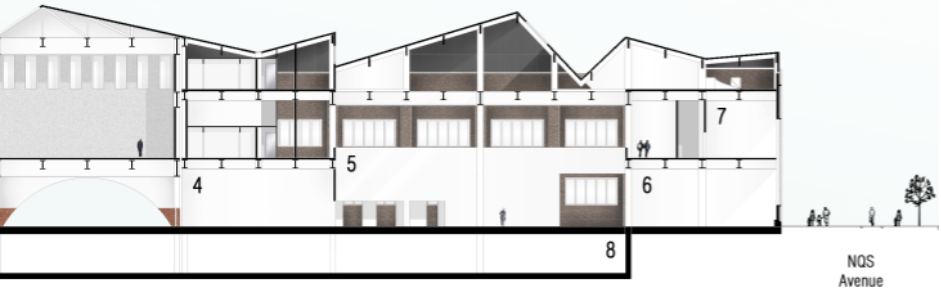
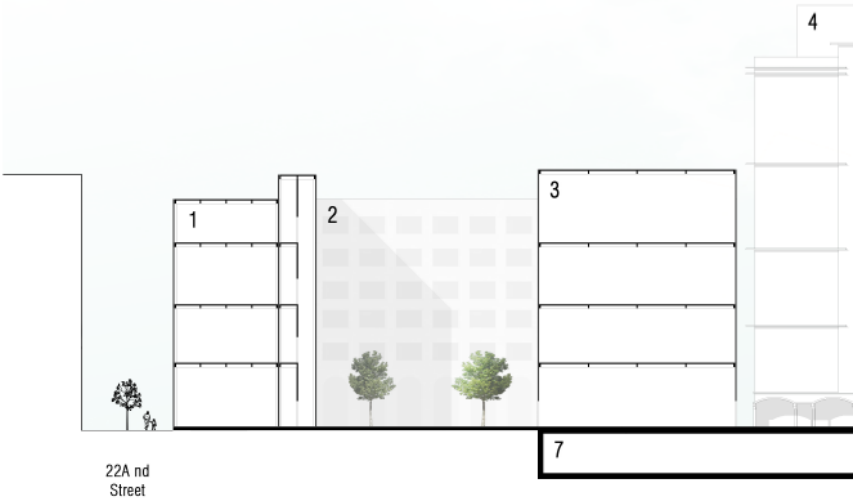
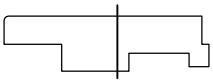


Section AA

1. Existing Building. MCI Offices
2. Service Entrance
3. Multipurpose Event Space
4. Kitchen
5. Lobby
6. Book Store / Library
7. Meeting Room
8. Basement Parking





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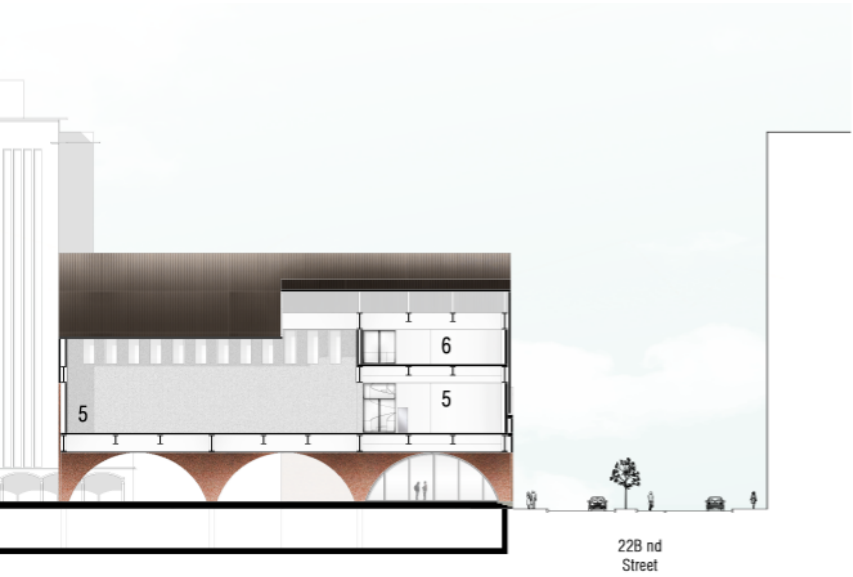
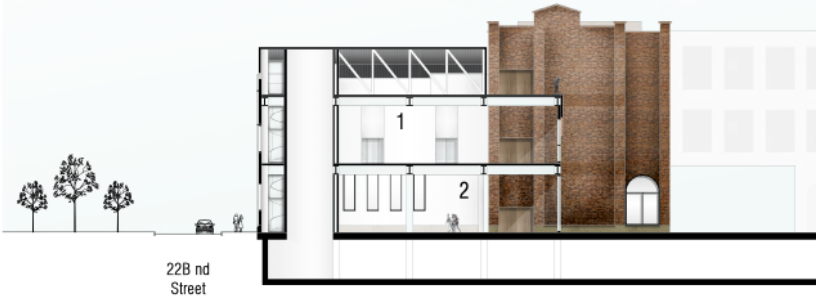
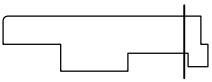


Section BB

1. Existing Building. Science Center
2. Courtyard
3. Addition. Science Center
4. Silos. Beer Museum
5. Multipurpose Event Space
6. Learning & Community Center
7. Basement Parking





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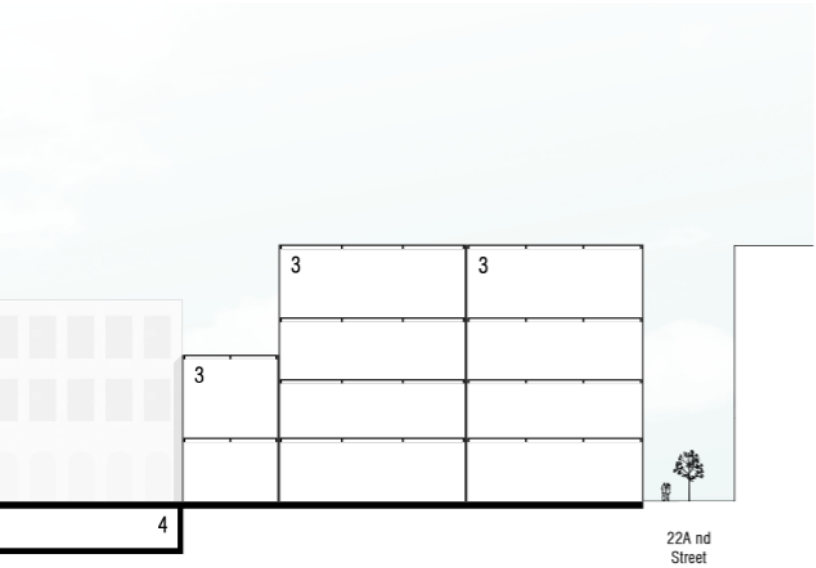


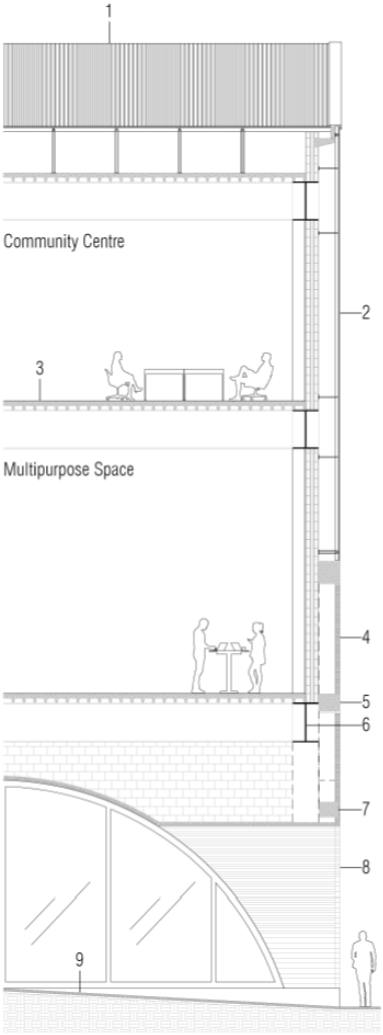
Section CC

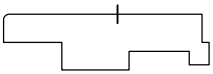
1. Meeting Room
2. Book Store / Library
3. Existing Building. Science Center
4. Basement Parking

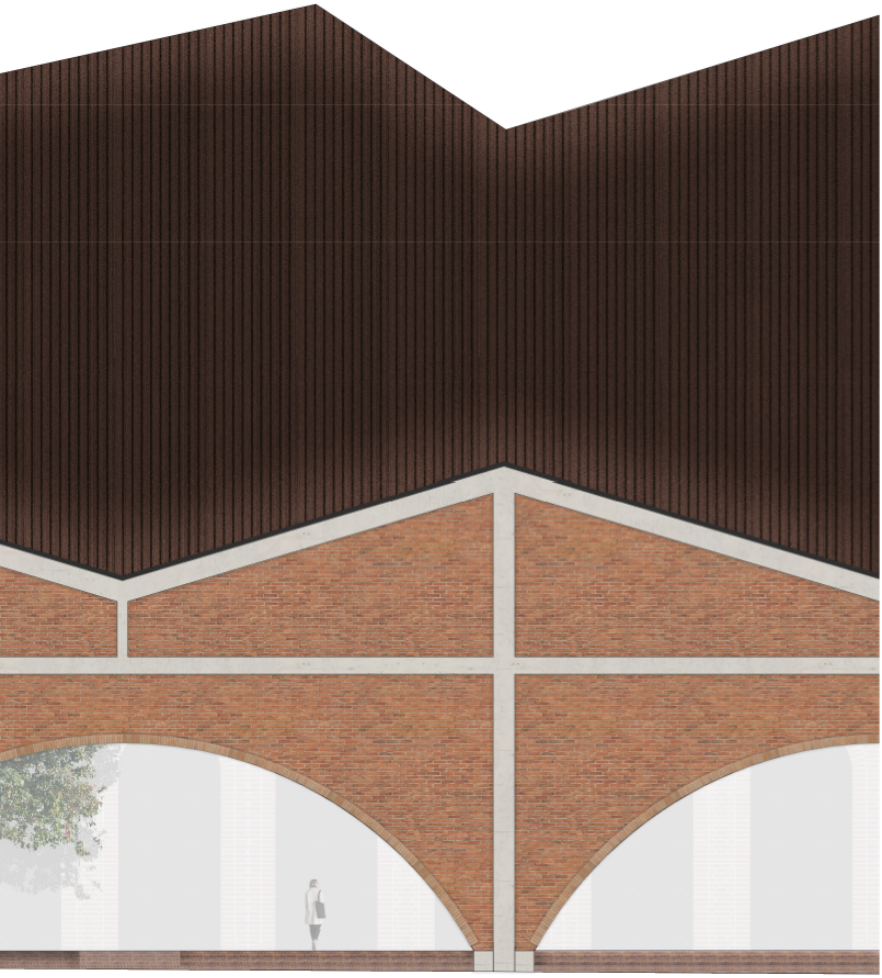
Vertical Section

North Facade

1. Steel corrugated roofing sheet; polyester paint coated in black.
2. Black aluminium standing seam cladding profile.
3. 20 mm reinf. concrete slab / corrugated metal.
4. 75/120/200 mm brick mansonry (existing).
5. 500/400 mm reinf. concrete beam (exisiting).
6. 900/600 mm steel I profile.
7. 450/345 mm reinf. concrete beam (addition).
8. 75/120/200 mm brick mansonry (addition).
9. 60 mm paving bricks; 40 mm bedding sand.







IV
Learning Outcomes

As mentioned at the beginning of the document, the intervention proposal turns around the adaptive reuse of existing buildings as a tool to avoid obsolescence. In architecture, obsolescence appears due to the absence of use or, on the contrary, when the building cannot satisfy the users' current needs. It is at this point that the building is considered obsolete and consequently abandoned.

The causes that led to the obsolescence of the Andina Brewery, as it could well establish, corresponded to the commercial competition between Bavaria and the Puyana Brothers but not to a functional deficiency of the whole. On the other hand, its deterioration resulted from oblivion due to the city's rapid growth and lack of interest in preserving its architectural values.

In this context, adaptive reuse was not only understood as a practice to renovate and adapt existing buildings to serve new and future needs, but as a tool that allows the identification and preservation of the urban, technical and aesthetic values of the industrial complex. Besides, it is essential to mention that, as a learning result derived from this work, it was possible to comprehend the adaptive reuse as a design methodology with which it is possible to:

1. Understand the history of the place.
2. Design buildings that promote functional flexibility and adaptability over time.
3. Find in the reuse and recycling of buildings an alternative to demolition.

1. Understand the history of the place

Adaptive reuse not only appears then as a tool capable of transforming abandoned sites into vibrant urban districts but also as a method of reaction to oblivion and obsolescence. For this, it is vital first to understand the history of the place, discover its soul, and understand everything that came before to generate future changes.

We must return to the past to understand these places' potential, recover their identity, and highlight their cultural value. Michel Serres calls "quasi-objects" those places, in which only specific residual values remain. The example of the soccer ball illustrates this notion. Serres described how the ball participates and coproduces a specific mode of human interaction we call soccer. It is something simple enough to visualize: without the ball there is no game (Otero-Pailos, 2016, p. 16)

In this sense, without the Andina Brewery building complex, the Puente Aranda industrial zone would not exist, and without it, a large portion of the city would lack identity. Just as it is almost impossible to imagine what this area be like without the Andina Brewery's existence, it would also be challenging to imagine Hämeenlinna without the old garment factory Verkatehdas or the Largo Isarco industrial complex of Milan without the former gin distillery.

2. Flexible and adaptable design.

In an article titled 'We must look to the past, for a lesson in designing buildings for the future' published in July 2019, Architect Karin Krokfors suggest that buildings' design should be adaptable over time. Moreover, Krokfors states that history contains many examples to be studied.

According to Krokfors, both the old merchant houses of Amsterdam (some of which date from the 17th century), London's Victorian townhouses, and even the apartments in older parts of Helsinki share spatial characteristics that allow them to house multiple uses by being easily configured. Furthermore, Krokfors continues that transformations in these buildings are feasible due to the internal routes that feed the different parts of the building, room spaces large enough that can be divided and combined in different sizes, and their horizontal and vertical adaptability.

Krokfors finds in flexibility the answer to how the design of buildings should be in order to promote the idea of multi-usability. Moreover, Krokfors points out that "we need to bring back that feeling of inspiration, and offer people buildings that can be adapted easily overtime to meet our changing needs."

Krokfors clarifies that the above is not an idea to return to the past's form and function. Instead, it is a suggestion to establish guidelines to recover the built

environment's quality, the inspiration that these places offer to people, and provide buildings that can be easily adapted overtime to meet our changing needs.

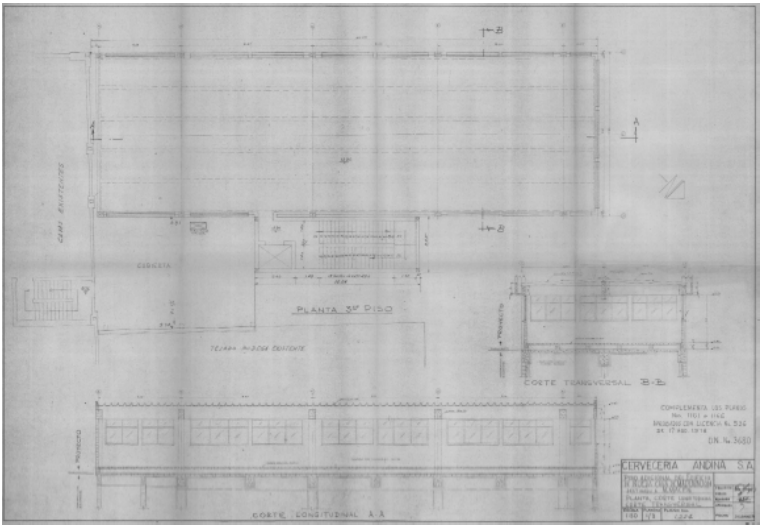
3. Reuse as an alternative to demolition.

Considering the environmental consequences of demolition makes it imperative to suggest adaptive reuse as an alternative path to overcome the climate change crisis. It is also necessary to re-define the concept of sustainability where a building is "truly sustainable if it remains in use for long enough to justify the resources invested in its creation." Mahan, F., Kluytenaar, V. (2019). In this context, while a large amount of energy goes into building construction, from the extraction and processing of raw materials and transportation, with demolition, besides the waste of materials resulting from this process, that energy initially invested is also lost.

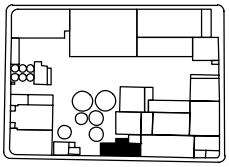
In consequence, contrary to demolition, adaptive reuse allows the development of urban areas with higher density and preserves the legacy and historical values that define the sector. Moreover, adaptive reuse would encourage tourism and business development by respectfully design strategies that align future users' needs with the place's memory while modernizing places for the next generation. Finally, any attempt to re-signify a place, the past's memory must prevail over the present, thus avoiding its obsolescence.

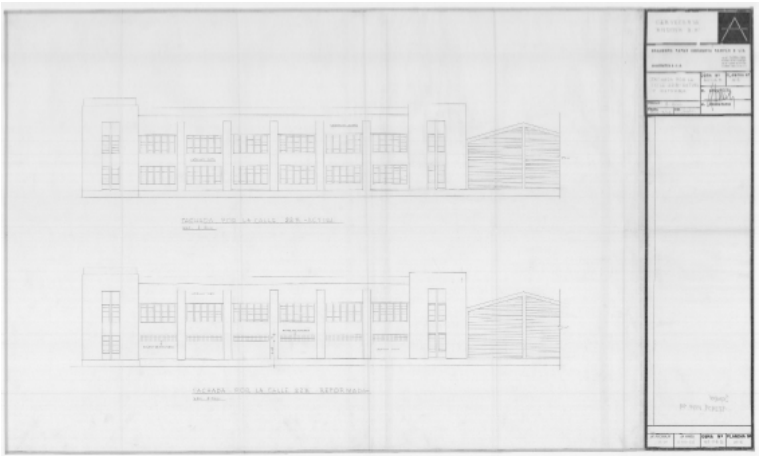
4.1
Andina Brewery Historical Plans and Drawings

The images presented below are part of the collection of historical drawings of the old Andina Brewery owned by the Archivo de Bogotá and the Instituto Distrital de Patrimonio Cultural (IDPC). Unfortunately, it was impossible to locate planimetric information of the entire industrial complex due to planimetric information is limited.

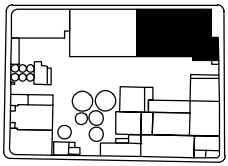


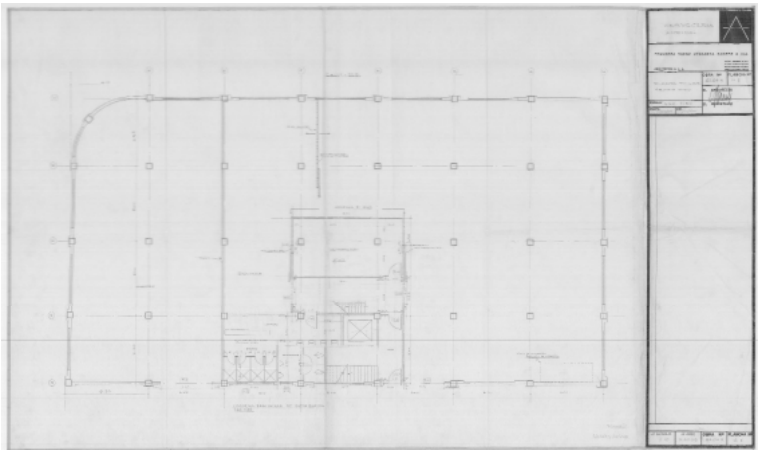
Additional warehouse floor plan and section. (n.d.), 1978.
Retrieved from Archivo Distrital.



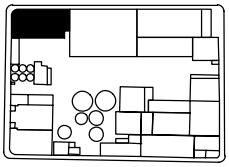


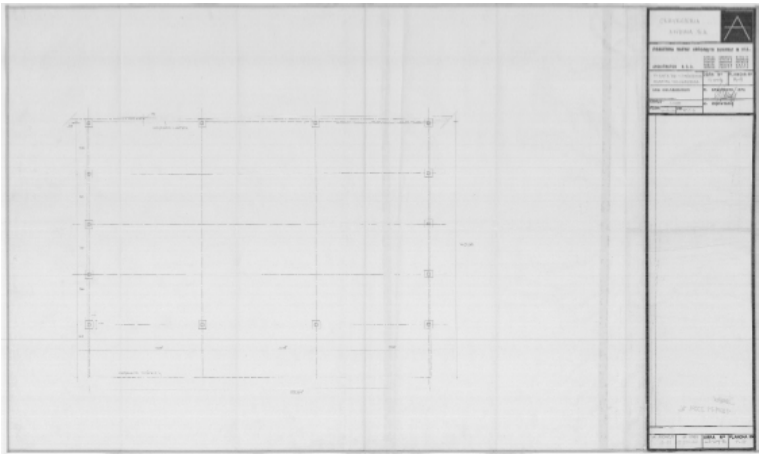
North Façade, current and reform. Esguerra, Saenz, Urdaneta, Samper & CIA, 1964. Retrieved from Archivo Distrital.



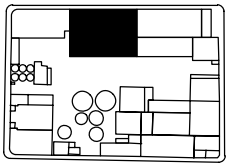


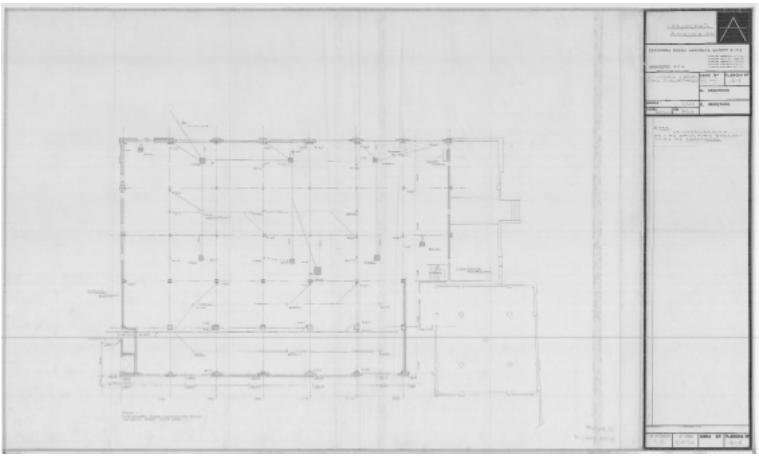
First floor workshop plan. Esguerra, Saenz, Urdaneta, Samper & CIA, 1964.
Retrieved from Archivo Distrital.



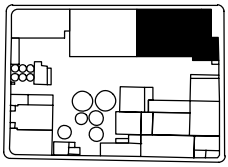


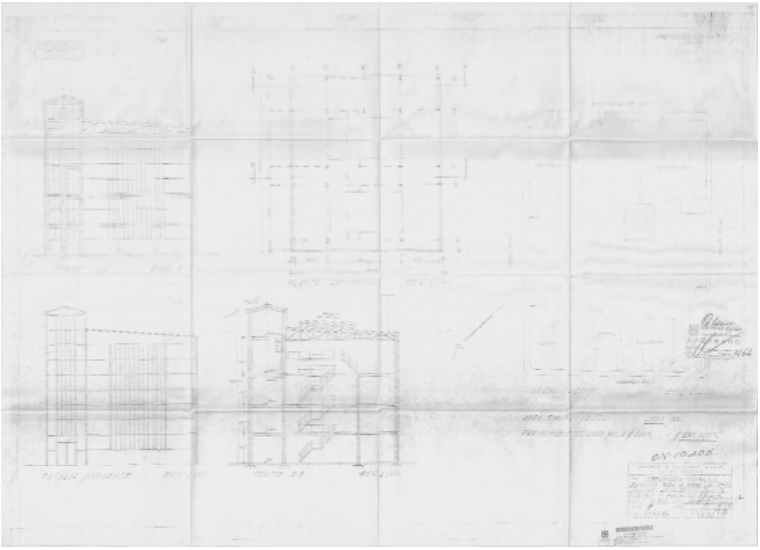
Beer cellar floor plant. Esguerra, Saenz, Urdaneta, Samper & CIA, 1963.
Retrieved from Archivo Distrital.



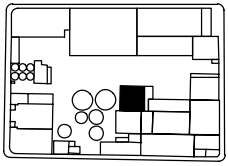


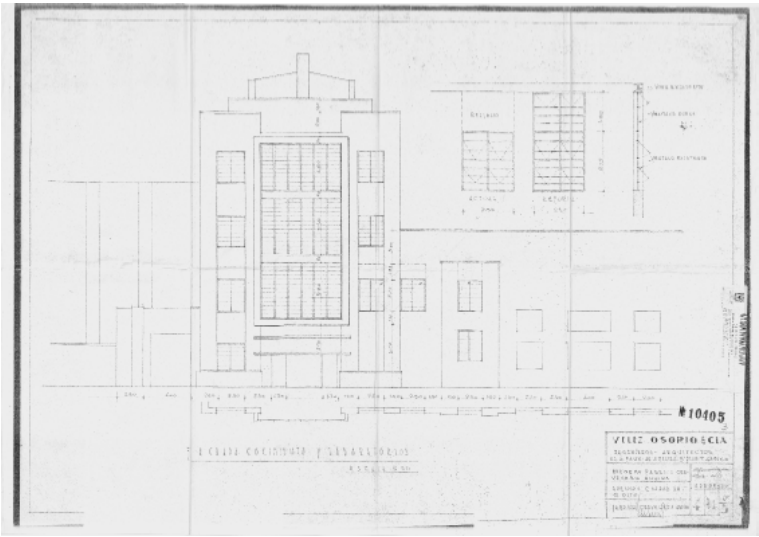
Northeastern corner building floor plan. Esguerra, Saenz, Urdaneta, Samper & CIA, 1963. Retrieved from Archivo Distrital.



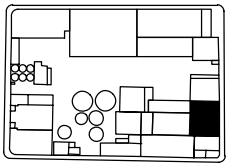


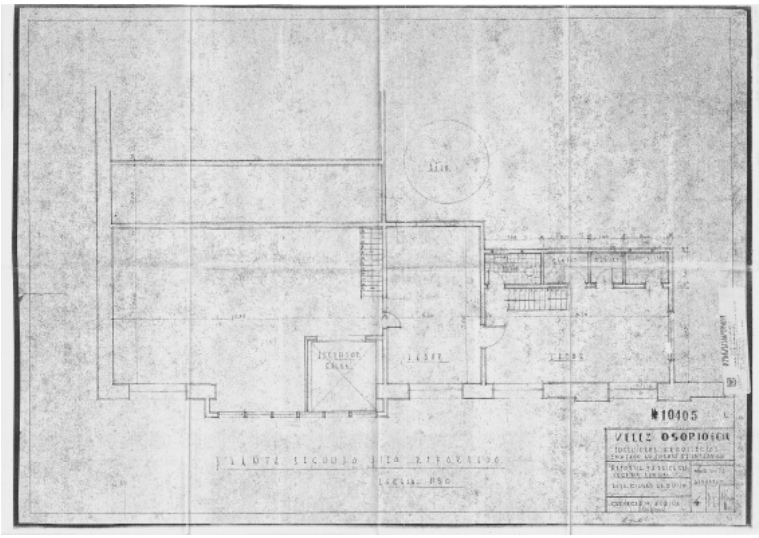
Boiler building. Ibañez & Manner, 1956.
Retrieved from IDPC.



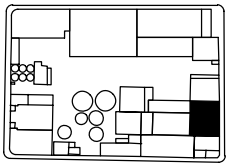


Reform of the Knowledge and Laboratories building. Velez Osorio & CIA, (n.d.)
Retrieved from IDPC.





Reform of the Knowledge and Laboratories building, floor plan. Velez Osorio & CIA, (n.d.). Retrieved from IDPC.

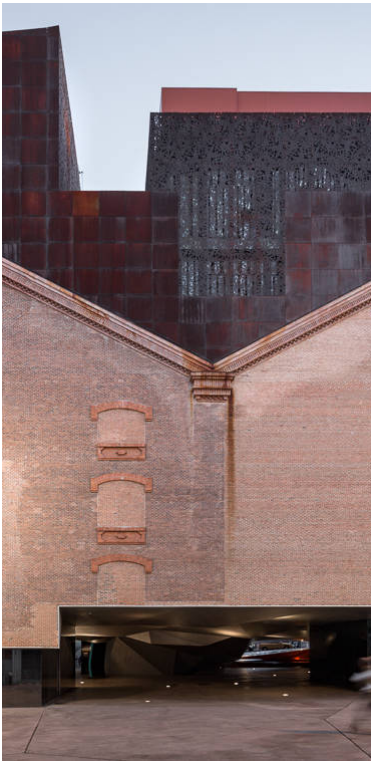


4.2
Architectural Sources of Inspiration

The projects presented here below, in one way or another, explore the concept of adaptive reuse. The choices were influenced by presenting typological similarities with the Andina brewery and the formal and aesthetic aspects of each intervention.

18. Fondazione Prada - OMA
Milan, Italy. 2018.

19. Verkatehdas Arts and Congress Centre - JKMM
Hämeenlinna, Finland. 2007.



20. Caixa Forum Madrid - Herzog & De Meuron
Madrid, Spain. 2008.

21. Canary Island Museum - Nieto Sobejano
Las Palmas de Gran Canaria, Spain. 2012.

22. Neues Museum - David Chipperfield
Berlin, Germany. 2009.

List, in chronological order, of other sources of inspiration.

2021
Trilateral Wadden Sea World Heritage Partnership Center - Dorte Mandrup. Wilhelmshaven, Germany. (Expected).

2019
N09-Z33 - Francesca Torzo Architetto. Hasselt, Belgium.

2018
Tai Kwun, Centre For Heritage & Arts - Herzog & de Meuron. Hong Kong.
Fondazione Prada - O.M.A. Milan, Italy.
Fragmentos - Granada Garces Arquitectos. Bogotá, Colombia.

2017
Music School Bruneck - Barozzi Veiga. Brunico, Italy.

2016
Elbphilharmonie - Herzog & de Meuron. Hamburg, Germany.
The Tate Modern Project - Herzog & de Meuron. London, United Kingdom.
Port House - Zaha Hadid Architects. Antwerp, Belgium.

2015
FRAC Nord-Pas de Calais - Lacaton & Vassal Architectes. Dunkerque, France.
Meelfabriek Master Plan - Studio Akkerhuis. Leiden, Netherlands. (Under Construction).

2014
Coal Drops Yard - Heatherwick Studio. London, United Kingdom.
Toni-Areal - EM2N. Zurich, Switzerland.

2012
Canary Islands Museum - Nieto Sobejano Architects. Las Palmas de Gran Canaria, Spain.

2010
Bombay Sapphire Distillery - Heatherwick Studio. Hampshire, United Kingdom.

2009
Neues Museum - David Chipperfield Berlin, Germany.
Paper Mill Museum - Álvaro Siza. Leiria, Portugal.

2008
Caixaforum Madrid - Herzog & de Meuron. Madrid, Spain.

2007
Royal Ontario Museum - Studio Libeskind. Toronto, Canada.
Kolumba Museum - Peter Zumthor. Cologne, Germany.
Verkatehdas Arts and Congress Centre - JKMM. Hämeenlinna, Finland.
Zollverein Kohlenwäsche - O.M.A. Essen, Germany.

2006
Jægersborg Water Tower - Dorte Mandrup. Jægersborg, Denmark.

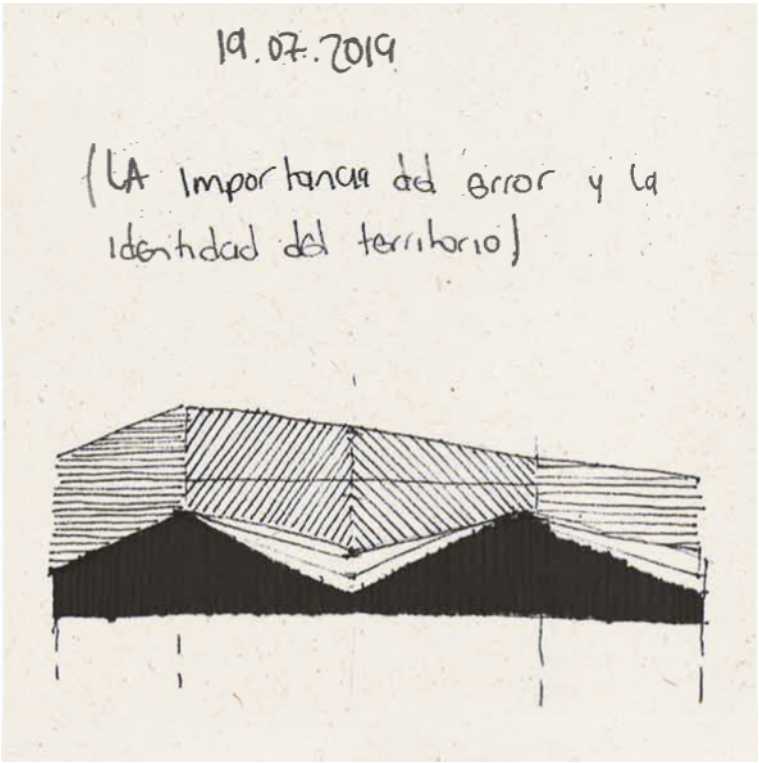
2005
Frøsilo - MVRDV. Islands Brygge, Copenhagen, Denmark.

2003
Dia:Beacon - Rice+Lipka Architects. Beacon, NY, USA.

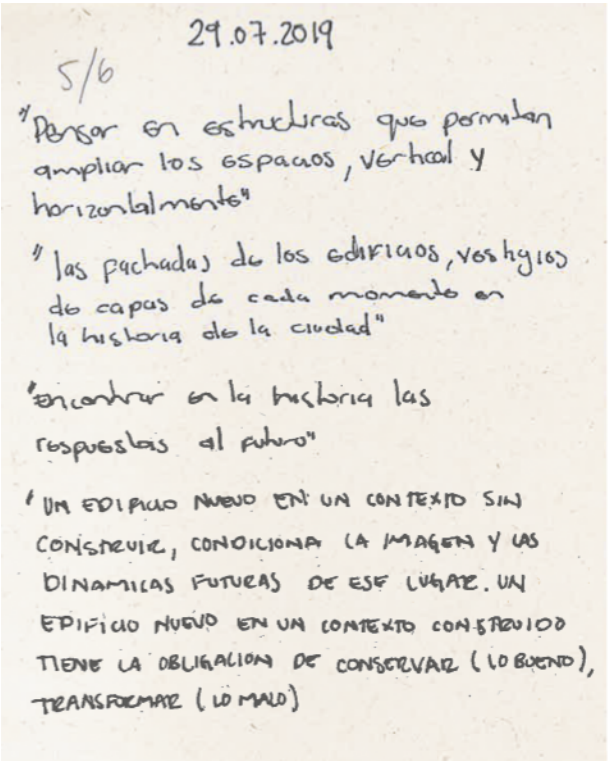
2001
SiO Silo - HRTB Arkitekter. Grünerløkka, Oslo, Noruega.

4.3
Preliminary Drawings and Ideas

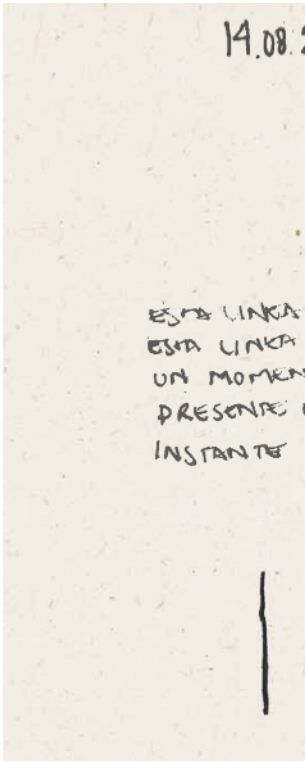
The process began in the summer of 2019. Although many things have changed since then, only one thing has always remained present, keeping the memory of the Andina Brewery alive.



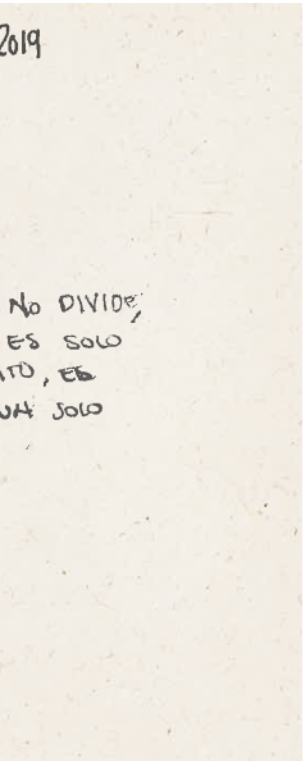
Shape and texture analysis.
In the text: The importance of the error and the identity of the territory.



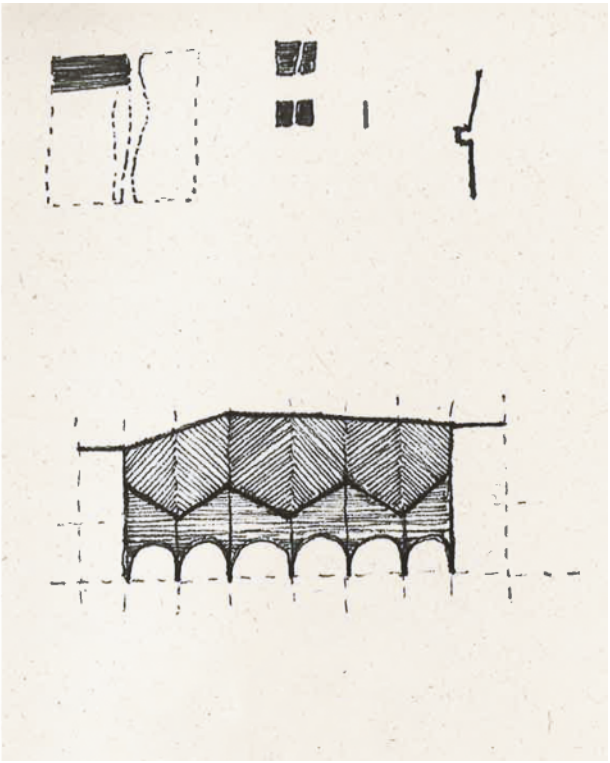
In texts: 1. Think of structures that allow spaces to be expanded, vertically, and horizontally. 2. The facades of the buildings, vestiges of layers of each moment in the history of the city. 3. Finding the answers to the future in history. 4. A new building in an unbuilt context condition the image and future dynamics of that place. A new building in a built context has an obligation to conserve (the good), transform (the bad).



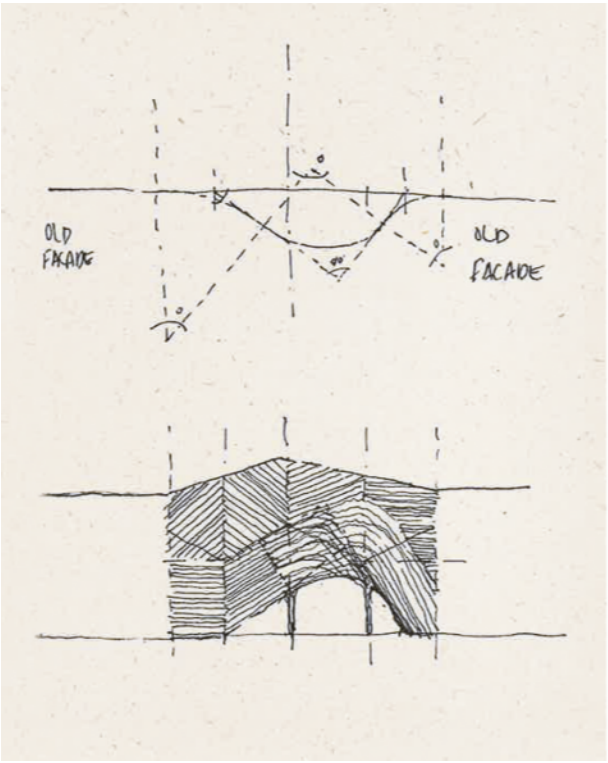
In the text: This line does not divide; this one m



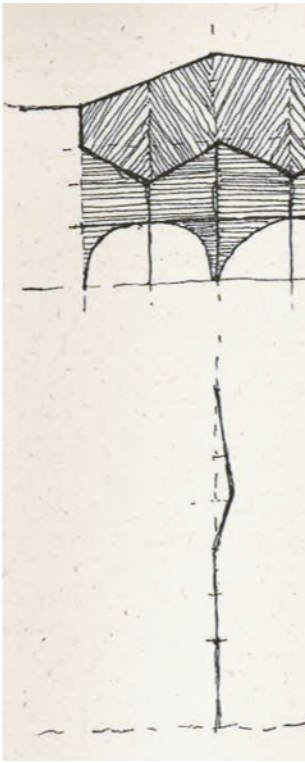
line is only a moment; it is present only oment.



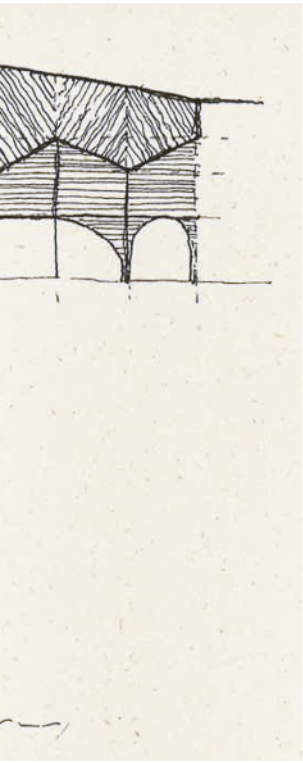
Studies of form, openings and textures.



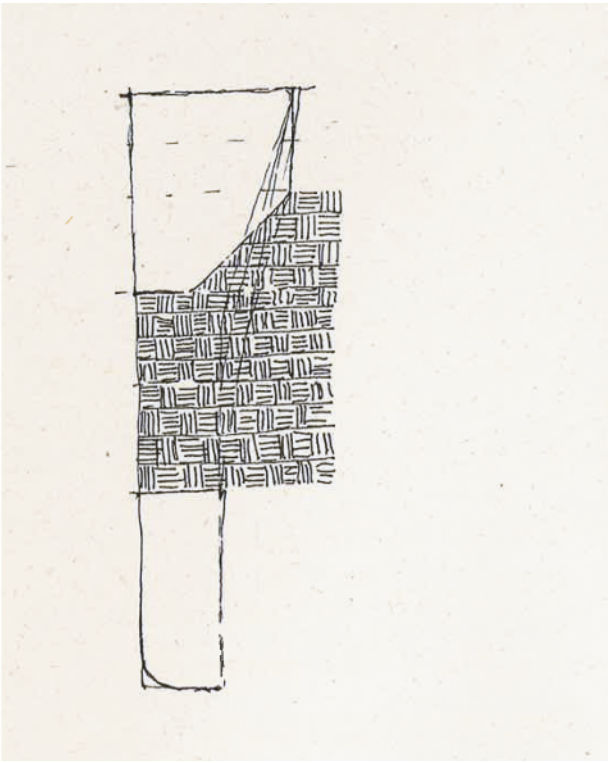
Geometries, textures and openings.



Form studies a



and openings.



Preliminary study north passage. Ground floor textures.

11.09.2019

" Phenomenology of memory becomes an exploration of matter, and vice versa." Daniel BIRNBAUM, Director of the Moderna Museet.

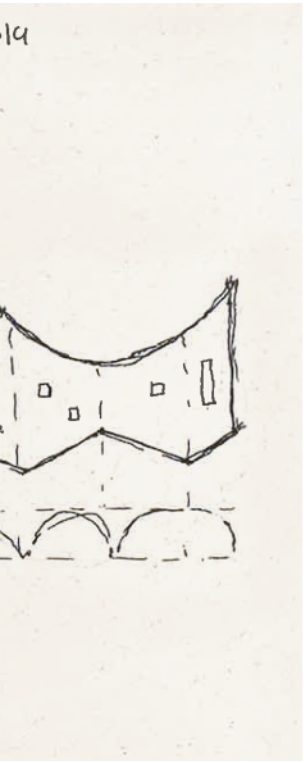
" Designing in 'Future anterior' (Jorge Otero-Pailos), both old and new, both traditional and experimental... ~~While the~~ ...star architecture system looks like an increasingly solipsistic and exhausted formalism..." Nikolaus HIRSCH, architect and curator.

" What if it is only by experimenting with historical artifacts that they are truly protected and play an active role in the deepest and most urgent cultural debates?" Mark Wigley

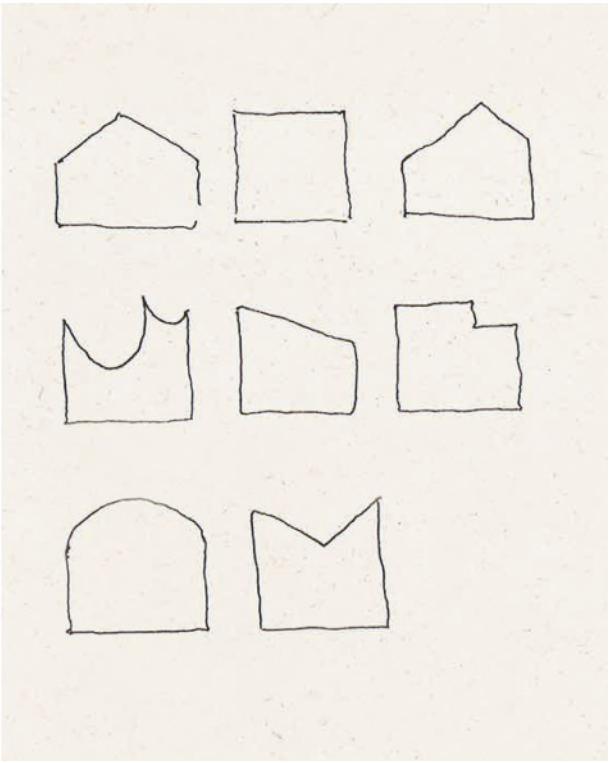
27.09.20

Inspirational Notes. Various authors.

Openings and



form studies.



The final shape in this drawing represents the beginning of the end. After testing various options for the roof's shape in the new building, a fragment of the existing facade originated the idea for the final proposal.

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Mapas Bogotá
https://mapas.bogota.gov.co/

Cartografías Bogotá *http://cartografia.bogotaendocumentos.com/*

Image Credits

1. Cover image. Illustration of the different interventions carried out on the north façade of the Andina brewery. Plans provided by the Archivo de Bogotá, IDPC, and the author's intervention proposal.

2. Aerial photography, 1966. (n.d.). Retrieved from: https://twitter.com/BogotaAntigua/status/565187684100890624/photo/1

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Additional notes:

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The source of human-scale images used in the 3D visualizations is MrCutout, retrieved from https://www.mrcutout.com/

Aalto University
School of Arts, Design and Architecture
Department of Architecture. Masters' Programme in Architecture
Julian Ardila Ospina
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Espoo, Finland